

MODERN PACKAGING

IN THIS ISSUE:

*Self-selling packaging
is working a revolution in
the hardware store*

SEPTEMBER 1954

Ginst

How to help business. Use postage stamps to carry news of today's industry developments—to today's buying public!



First change in envelope sealing

NEW ENVA-LOK—the first revolutionary change in envelope sealing in over 50 years—dramatically cancels any chance of faulty sealing. It is a remoistening resin emulsion. It has been developed and successfully introduced by NATIONAL to replace dextrin-type remoistening gums which have long been accepted as standard by envelope makers.

NEW ENVA-LOK produces an instant safety seal on all types of envelope stock, including the heretofore difficult rag and kraft stock which often required extra unsightly taping to insure safe delivery. The paper tears before the seal yields, even high quality bond or heavy kraft.

NEW ENVA-LOK does not cause envelopes to stick together during manufacture, storage or addressing and stuffing in humid weather. This eliminates waste. It does not cause flaps to curl. This permits the envelopes to lie flat. They stack tighter. They speed automatic addressing and stuffing. They permit better printing and engraving.

NEW ENVA-LOK, deposits a thin, clear film. It makes a better looking, quality envelope. Millions of envelopes are being made with ENVA-LOK.

• • •

This successful remoistening resin emulsion has great potential use in other fields such as labeling, sealing tape, decalcomania, etc. Write for samples and technical data.



National Starch Products Inc.
(Resin Division)

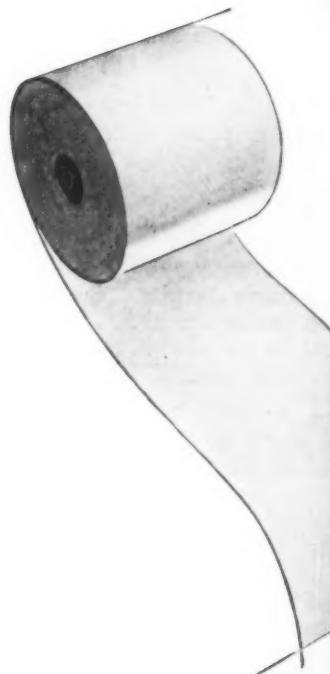
270 Madison Avenue, New York 16
3641 So. Washtenaw Avenue, Chicago 32
735 Battery Street, San Francisco 11

*Patent applied for.

boxboards?

GAIR

**CAN
SUPPLY**



- GAIRCOTE (Clay Coated)
- WHITE PATENT COATED
- BLEACHED MANILA
- MIST COLORS
- WHITE TUFBOARD
- BROWN TUFBOARD
- KRAFT SPECIALTIES
- CARRIER BOARDS
- PLAIN CHIP
- CREEPING CHIP
- PASTED BOARDS
- LINED BOARDS
- WHITE WOOD VAT
- PARTITION STOCK
- GLASSINE LAMINATED
- POLYETHYLENE COATED
- VPI LAMINATED

— and many others in a broad range of grades, weights, finishes and special treatments to meet your requirements.

Here are some of the different products which the Gair Boxboard Division produces for independent converters. Which can you use in your present or projected operations?

Perhaps none of these is exactly what you want. In that case, we'll be glad to work with you in developing a special board to *your* specifications. You'll be working with a company that has the necessary experience — and the necessary production. Currently, we are producing over 600 tons of boxboard a day — more than 30 carloads — *exclusively for independent converters.*

BOXBOARD

ROBERT GAIR COMPANY, INC.,
155 EAST 44th ST., NEW YORK 17

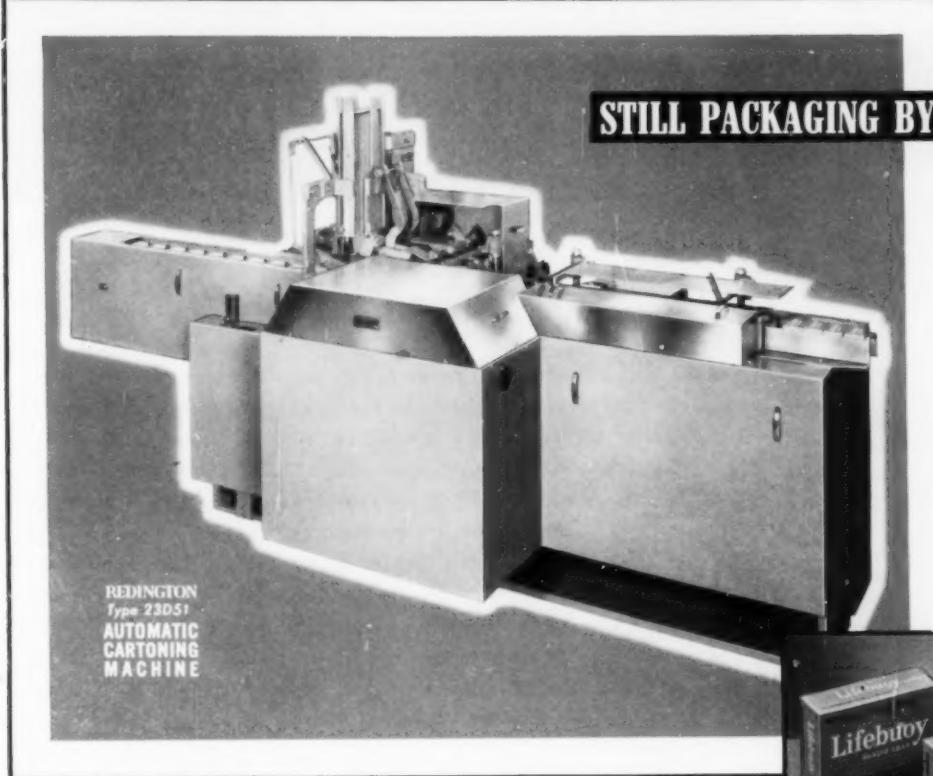
MODERN PACKAGING

September 1954, Vol. 28, No. 1

Picture packs	95	Packaging Pageant	126
The full-color, appetite-appeal illustration is spreading to a new field in transparent film packaging.		Tray pack holds four cans of frozen concentrates . . . refillable polyethylene bottles with applicator closure . . . other new ideas.	
Aerosol dusts	100	Accent on production	128
Push-button dispensing of powders is now possible and a whole new field may open up if certain problems can be solved.		'Third shaker' seasoning has ultra-modern packaging plant and package family.	
A new kind of tea bagger	102	Radar in re-use 'cans'	133
Lipton's German machine forms bags, inserts each in envelope and puts envelopes by count in cartons.		G.E.'s solution to an Air Force packaging problem cuts weight, cube and time.	
Cushioned bottle carriers	106	Non-crush candy tray	136
Anheuser-Busch increases protection 65% by simple embossment of partition walls.		Rockwood's special construction with center divider and multiple ends stops breakage.	
Hardware	108	Display Gallery	140
Convenient, colorful display packaging brings 50,000 items out of hiding into the limelight of orderly self selection. A MODERN PACKAGING Industry Survey.		Mobile footforms promote slippers . . . simple acrylic display has quality appeal . . . "pie-wagon" floor stand for pie mix . . . two displays merchandise baby pants.	
Stopette meets the trends	115	The potato goes modern	142
The pioneer of all the squeeze bottles adopts improved design and display methods in line with self-service needs.		Sales-stimulating packaging at last reaches the lowly spud.	
Design Histories	116	Technical	
Vitamins in glamour pack . . . novel grass seed packs . . . kit for artificial flowers . . . smart design for small tools.		Glass-reinforced paper	149
Built like a beehive	118	Non-woven glass-fibre scrim, introduced on the paper machine, gives superior strength at economical cost. By ROBERT T. SEITH.	
Cone-shaped paperboard construction provides base for winding rubber stripping.		Wood at low temperatures	153
Paper-sling pallet	120	It generally gains strength at extreme low temperatures, but in containers there are other factors. By KENNETH M. BOLLER.	
It's only a sheet of kraft and two paper tubes, but it carries ton weights.		Questions and Answers	158
Kellogg's Norman Rockwells	122	Departments	
Company's magazine-cover carton technique offers a perfect vehicle for contest built around famous illustrator's drawings.		Equipment and materials	160
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*Reg. U.S. Pat. Office



STILL PACKAGING BY HAND?

AUTOMATIC CARTONING IS PROFITABLE ... with a REDINGTON !

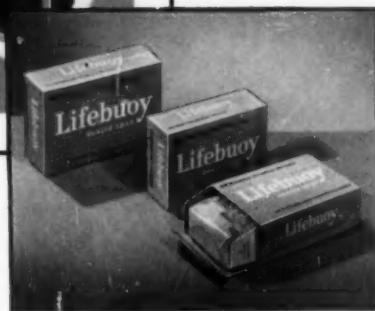
Why let profits leak away, when you can get much more production per weekly wage-check by eliminating unnecessary hand operations? Hundreds of companies of many sizes and in many different types of business are making such savings, with faster, more dependable, *fully automatic* REDINGTON Cartoning Machines.

No question about it—the right REDINGTON in your plant can pay for itself in an amazingly short time. What's more, you will get consistently better cartoning at every stage of every run you make. REDINGTON Automatic Cartoners don't tire—don't mishandle cartons or products—don't send empties to your shipping room. Your REDINGTON-cartoned packages will be clean, complete and secure.

Lever Brothers Company, makers of Lifebuoy Soap, are one of a list of customers which reads like the Blue Book of American Industry. Acceptance by such leaders testifies to the superlative job a REDINGTON does for packagers of all kinds of products, from Macaroni to Mason Jar Lids. Why not put REDINGTON's 57 years of experience behind your packaging? There's no obligation in calling us in to talk over possibilities for improving your operating profits. Send for our fully illustrated 32-page catalog today!

F. B. REDINGTON CO.

110-112 SO. SANGAMON ST., CHICAGO 7, ILL. • HAYmarket 1-0680
342 Madison Ave., Room 828A, New York 17, N. Y. • MURRAY HILL 2-6959



How the REDINGTON Type 23D51 Cartons Lifebuoy Soap . . .

The wrapped bars are picked up directly from the wrapper, each in a pocket of the intake conveyor. As each reaches the carton magazine, the REDINGTON automatically forms and feeds a carton, and inserts the wrapped bar. Then the machine tucks in the end flaps of the carton, to complete the package. No carton will feed to an empty conveyor pocket.

This REDINGTON handles both regular and large sizes for Lifebuoy, with a simple setup change which takes only moments. Machines of this type will produce up to 200 completed packages per minute or more.



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indexed in *Industrial Arts Index*.

MODERN PACKAGING

‘\$30 billion for fun’

FOR LEISURE AND RECREATION, American consumers spend half again as much as they do on clothing and shelter, and twice what they lay out for new cars and home goods, according to the June issue of *Fortune*, which estimates the leisure market at \$30.6 billion—one of the largest and most complex in the country's economy.

This is something for packagers to think about. The average American with his shorter working hours and paid vacations has more time to play golf, fish, hunt, ski, swim, sail a boat, ride in automobiles, travel by train, ship or plane, listen to TV and radio, play bridge, tinker in a work shop, dig in a garden, go to ball games, horse races and theaters, paint pictures, take photographs, collect stamps and a dozen other things that strike his fancy.

If he continues to have more in his pay envelope, as he has for the last decade, he will have more money to spend on this leisure.

These leisure activities are accompanied by all manner of packaged purchases, from boxed accessories for stamp collectors to bottles of pop at Ebbets Field.

There's money to be made by those with the foresight to select the right products and to package them with the right appeal for this market.

Already the trend is apparent in the boom of power tools, the success of a packaged game like Scrabble, the popularity of art sets with which anybody can paint a picture by numbers, packaged plant foods and garden supplies, packaged accessories for outdoor dining, packaged food snacks like Fritos—expressly created for leisure munching; the amazing rise in sporting-goods sales—up 7% to as much as 33% in retail outlets across the country; the increase in packaged needlecraft and sewing supplies, artificial flower makings, bead trimming, etc., for the housewife.

The leisure market is beginning to be recognized as a distinct and significant influence in contemporary living that deserves watching. It will bring new concepts to packaging for everything from convenient cosmetic kits for travelers to the appetite appeal of a cellophane package for the hot-dog buns that go along on the week-end picnic.



The Editors

MODERN PACKAGING

Dobeckmun creates...



A new package that's striking "pay dirt" for Monsanto!

Monsanto wanted a package for *Krilium*® that would protect the product AND stimulate impulse buying at the point-of-sale. Dobeckmun designed and produced the package above, of laminated acetate and foil, printed by rotogravure. Now *Krilium* is taking its share of the growing small-garden market. Dobeckmun has created more than 800 packaging combinations to date and, if we haven't already got the answer to your product's problems, we'll have it in a hurry. Get in touch with us today. It pays.



Dobeckmun Company, Cleveland 1, Ohio • Berkeley 10, Cal. • Wells River & Bennington, Vt.

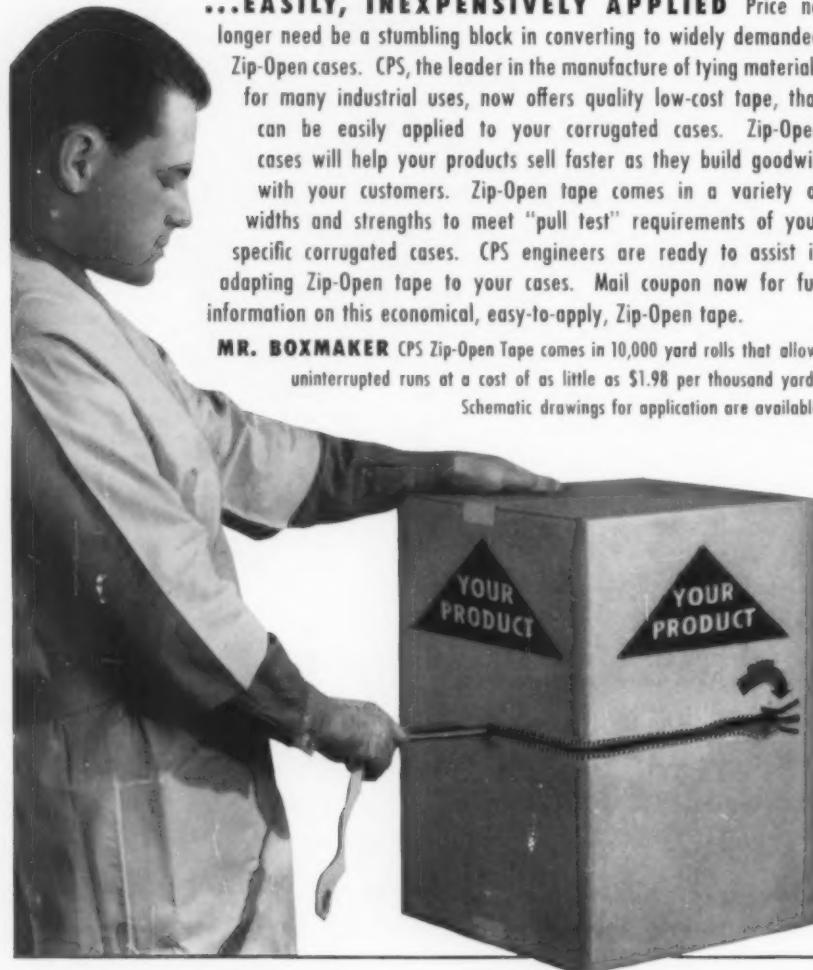
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SEPTEMBER 1954

5

Now...LOW COST CPS ZIP-OPEN 'TAPE'

for your corrugated cases...



...EASILY, INEXPENSIVELY APPLIED Price no longer need be a stumbling block in converting to widely demanded Zip-Open cases. CPS, the leader in the manufacture of tying materials for many industrial uses, now offers quality low-cost tape, that can be easily applied to your corrugated cases. Zip-Open cases will help your products sell faster as they build goodwill with your customers. Zip-Open tape comes in a variety of widths and strengths to meet "pull test" requirements of your specific corrugated cases. CPS engineers are ready to assist in adapting Zip-Open tape to your cases. Mail coupon now for full information on this economical, easy-to-apply, Zip-Open tape.

MR. BOXMAKER CPS Zip-Open Tape comes in 10,000 yard rolls that allows uninterrupted runs at a cost of as little as \$1.98 per thousand yards.

Schematic drawings for application are available.

CHICAGO PRINTED STRING CO., 2308 Logan Blvd. Chicago 47, Ill.

Gentlemen: We are interested in your Zip-Open Tape and would appreciate more information.

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

Our BoxMaker is

Company _____

Person _____

Address _____

City _____ Zone _____ State _____

YOUR PRODUCTS

Packed in Zip-Open Cases
enjoy these
**BIG SALES
ADVANTAGES**



SAFE...NO DAMAGE TO YOUR PRODUCTS

No more cut fingers with Zip-Open Cases.
No more costly damage when careless
knives slit or puncture your products.



SAVES RETAILERS TIME

Zip-Open cases save 1/3 the retailers time
over regular cases.



EASY TO MARK
Retailers appreciate the manhours they
save because of easier pricing of products.



EASY TO REMOVE
Shelf stocking of your items is one third
faster with Zip-Open cases.



CASES BECOME CARRY-OUTS
Neat Zip-Open cases are easy to use as
customer-order-cases.



HOME SHIPMENTS
Make an instant hit when Mrs Consumer
finds you've made it simple for her to open
your cases.

MODERN PACKAGING

Another new development using

B. F. Goodrich Chemical *raw materials*



B. F. Goodrich Chemical Company does not make these containers. We supply the Geon resin only.

New Disposable Vinyl Container answers many packaging problems

WHEN your design work calls for improving an existing product, Geon materials often provide the answer—and economically too.

This flexible, disposable container—made from a Geon polyvinyl material—packages the electrolyte for dry-charged storage batteries. Costing less than conventional containers used for this purpose, the tough bag requires a minimum of shipping space and carries a printed

sales message on its smooth surface. Its exceptional strength resists puncturing and tearing.

Because of Geon's resistance to acids, many chemicals and oil and grease, the container is also a "natural" for packaging motor oil, other lubricants, silicone greases, putties and caulking compounds.

Geon materials have many packaging uses—from film liners to drum coatings. We'll help you select the right material for your needs. For

information, please write Dept. GL-9, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.



GEON RESINS • GOOD-RITE PLASTICIZERS . . . the ideal team to make products easier, better and more saleable

GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers • HARMON colors

PROTECTED
by **Riegel**



NEW DESIGN FOR BORDEN'S FAMOUS ELSIE BRAND
FRENCH ICE CREAM ROLL—GRAVURE-PRINTED BY RIEGEL
ON A SPECIALLY TREATED PAPER HAVING LOW LIQUID
PENETRATION AND QUICK RELEASE.

More than 600 Riegel Papers are now proving their value for many of the nation's best-selling brands. It is the greatest variety of packaging papers available from any one source.

Somewhere among this wide selection you may find a better or more economical paper to protect your product. If we don't have just what you want, we can usually "tailor-make" a new paper to your specifications.

Write us now and tell us what you want paper to do for you. Riegel Paper Corporation, P. O. Box 170, Grand Central Station, New York 17, N. Y.

Tailor-made Packaging Papers

Riegel

GLASSINES AND GREASEPROOFS

Plain • Waxed • Printed • Lacquer-Coated • Laminated

NATIONAL CAN

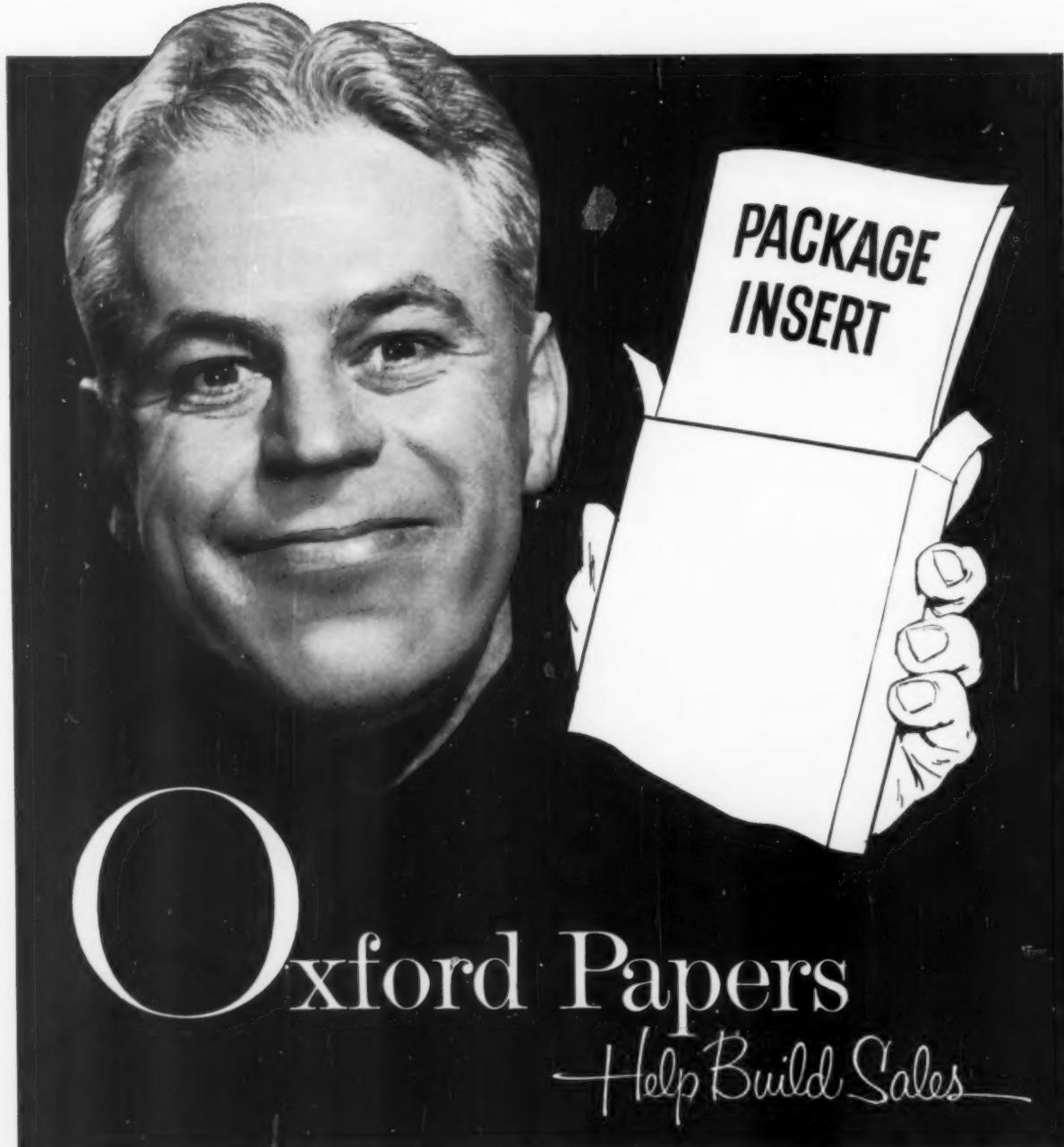


Old cars (like old fashioned canning operations) belong in the museum. 50 years of progress has produced the modern automobile — with increased speed, increased efficiency and lower operating costs. During the last half century — NC has modernized many concepts of can making and of the canning operation. It is their "old fashioned" know-how—combined with modern manufacturing methods—that has made NC a favored supplier to so many leading companies. Call or wire today for more specific information!



**THE SALESMAN
INSIDE**

The package insert is the vital link between pre-selling through advertising and re-selling the product in use. The "salesman inside" deserves the best—in design, in effectiveness, in the paper on which it appears. Ask your Oxford Merchant to show you successful examples of package inserts that *sell*.



OXFORD PAPER COMPANY, 230 Park Avenue, New York 17, N. Y. • OXFORD MIAMI PAPER COMPANY, 35 East Wacker Drive, Chicago 1, Ill.
Mills at Rumford, Maine, and West Carrollton, Ohio

Crystal Clear Insulation for Weatherstrip Sales!



Packaging a whole doorful of bronze weatherstrip in a handy, transparent Tri-State Rigid Plastic Box wrapped up dealer, display and inventory problems for **Metal Seal Products** of Chicago. The bright, bronze product provides its own bull's eye display. And the compact package keeps 17 feet of strip and nails intact, cuts down counter jumble.

Diversified "bonus" boxes like these, from Tri-State, have put selling lure into fishing tackle, punch into egg nog, "buy" into bow ties! There's a Tri-State rigid plastic shape to fit your product, insulate your sales, cut down your packaging costs.

INDUSTRIAL PACKAGING EXPOSITION...BOOTH 409

The best Rigid Plastic Boxes are Injection Molded by
TRI-STATE PLASTIC MOLDING CO., Inc.
HENDERSON 6, KENTUCKY

NEW YORK: 12 E. 41st St., MURRAY HILL 3-8743 CHICAGO: 176 W. Adams St., FRANKLIN 2-5367 DETROIT: 18401 E. Warren Ave., TUxedo 5-5500

SEPTEMBER 1954

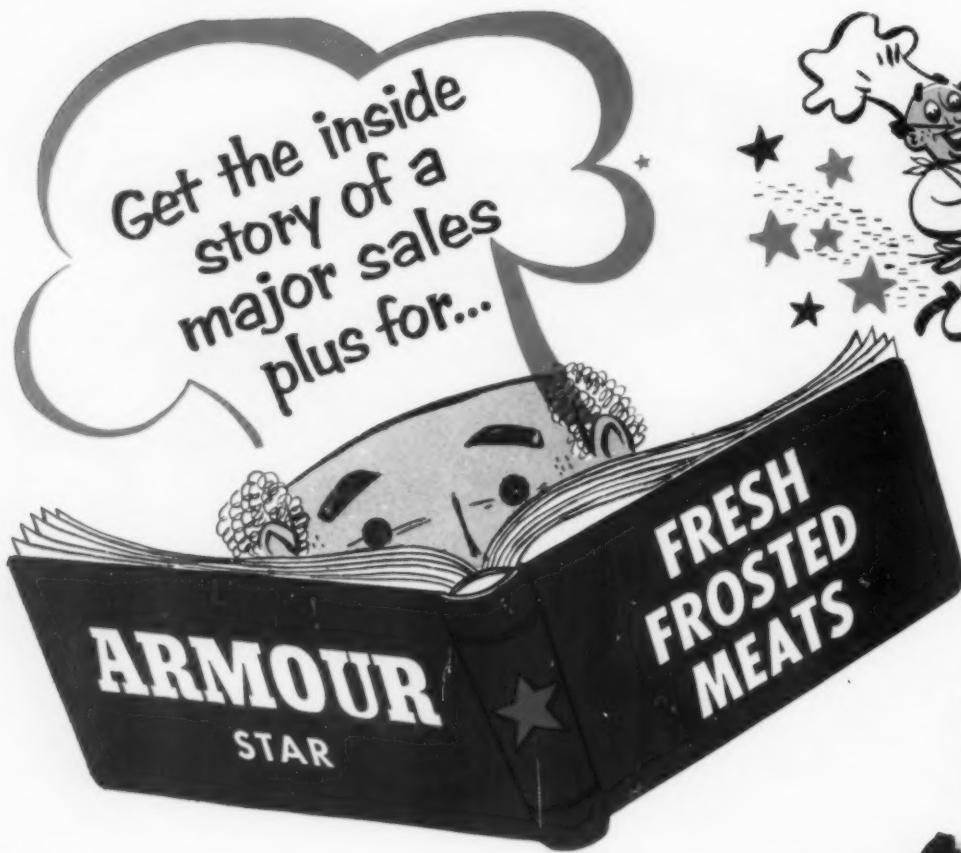


From the World's greatest assort-
ment of rigid plastics, Tri-State
No. 210F, diam: 3-5/8" x 1-5/16"
deep. One of a huge variety of
stock sizes and shapes, or we
will mold to your specifications.



Look into Tri-State
— Show-Window
Packaging





Pre-cut, portion-size, fresh-frozen meats are coming up fast in popularity. Sparked by Armour's Star line, protected by Reynolds Wrap Aluminum Packaging, they're appearing on more and more hotel, school and restaurant menus.

Reynolds Wrap Aluminum Packaging is a major reason why. It never deteriorates at low temperatures . . . shuts out moisture-stealing, flavor-stealing light and air . . . helps retail fresh meat quality, flavor and appearance.

These same qualities make Reynolds Wrap Aluminum Packaging a great sales booster for all packaged goods. Not only are more and more packagers using this best of all protection, but also more of them are identifying it by the Reynolds Wrap Aluminum Packaging Seal. They tell the story right on the package . . . and tell it with the name of America's favorite food-keeper: Reynolds Wrap.

See what Reynolds Wrap Aluminum Packaging—and the Seal—can do for your product. Contact any Reynolds Sales Office or **Reynolds Metals Company**, General Sales Office, Louisville 1, Kentucky.

National Advertising sells the Seal to your customers.

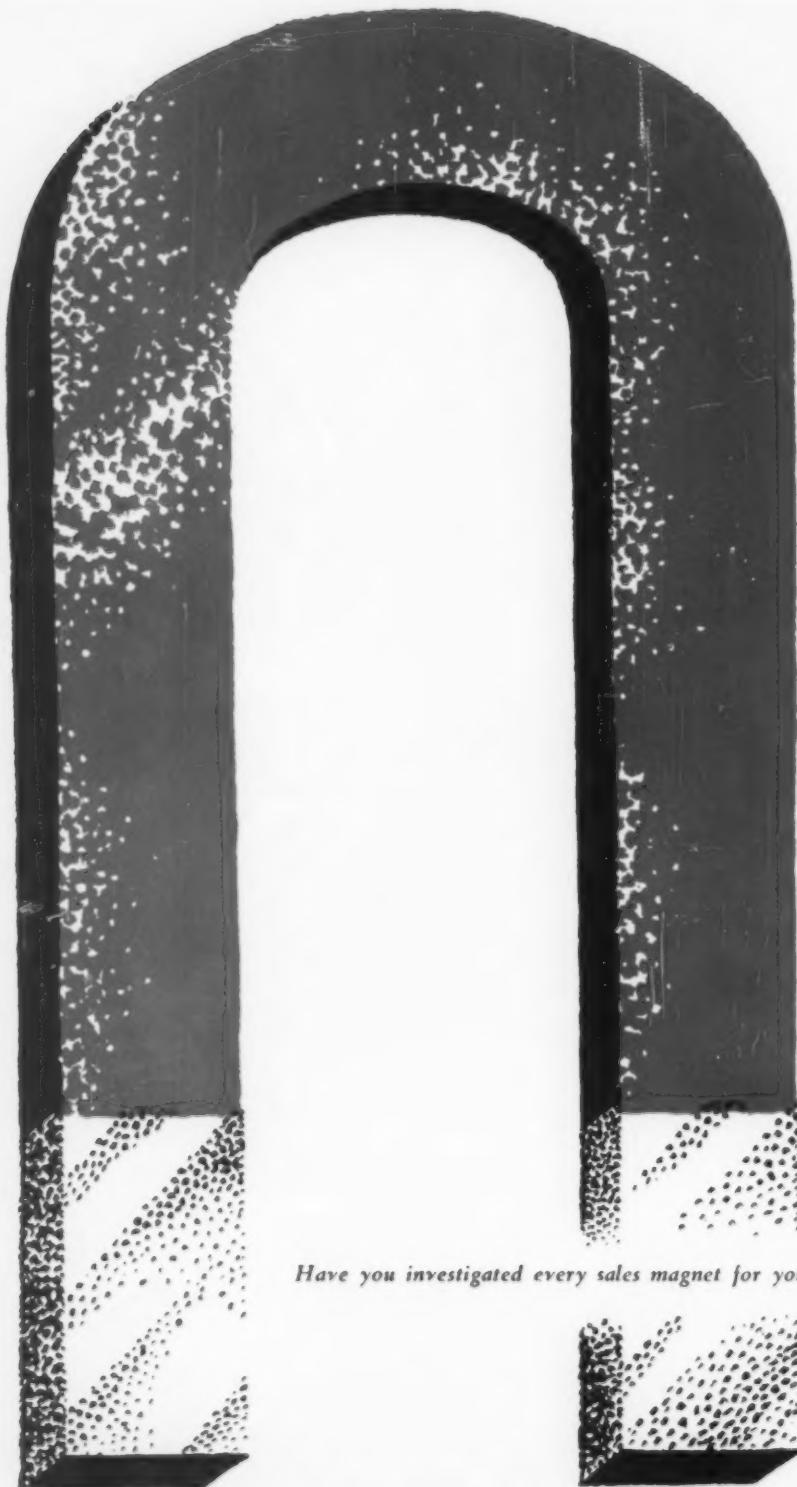
Month after month, on TV and in National Magazines and on rural Radio, Reynolds advertising is on the job . . . spreading news of quality protected by Reynolds Wrap Aluminum Packaging. Watch for this advertising . . . it can build business for you!

Pioneers in Aluminum Foil Packaging.

REYNOLDS  **ALUMINUM**

SEE "MISTER PEEPERS," starring Wally Cox, Sundays, NBC-TV Network.





Have you investigated every sales magnet for your product? What about Sun Tubes?

SunTube
CORPORATION



SUN TUBE CORPORATION, HILLSIDE, NEW JERSEY, Waverly 3-0400

St. Louis 1, Missouri: Marvin Yotes Co., Arcade Building
Cincinnati 8, Ohio: Ralph H. Auck, 3449 Custer Road
New Orleans 19, Louisiana: R. P. Anderson Co.,
925 N. Solomon Pl.
Houston 19, Texas: E. P. Anderson Co., 5643 Overbrook Lane

Dallas 2, Texas: R. P. Anderson Co., 1122 Texas Bank Building
West Coast: Wm. J. Stoepker, 301 E. Colorado, Arcadia, California
Canada: Sun Tube Corp., 145 Spruce Street, Ottawa, Ontario
Mexico: Tubos de Estano, S. A. de C. V.,
174 Oriente No. 267, Colonia Montezuma, Mexico, D. F.



Squeeze bottles--strong for sales and service

There's almost no limit to the eye-catching effects you can have in a squeeze bottle molded of BAKELITE Polyethylene—almost any shape, any color, any size. Its surface can be glossy or satiny, or molded with a decorative three-dimensional pattern.

After the sale, these bottles serve your customers and your product well. They won't break if dropped. They dispense contents drop by drop or in a fine mist, keeping your product safely protected until used.

Since BAKELITE Polyethylene is highly inert, there's no contamination of

contents. Bottles molded from it won't lose their shape or color because most acids, alkalies, and chemicals cannot harm it. Resistance to aging assures its long-lived resilience.

The light weight makes for easy handling and lower shipping costs. That's another reason why even big 13-gallon carboys are molded from BAKELITE Polyethylene for carrying acids and corrosive chemicals.

Start now to design your product with the sales and service advantages of BAKELITE Polyethylene. For the names of suppliers of bottles and other

packaging materials fabricated from this remarkable material, write Dept. YJ-30.

BAKELITE
TRADE MARK
Polyethylene

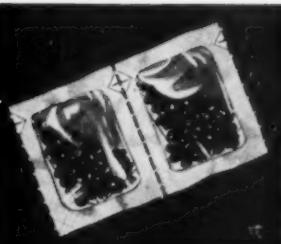
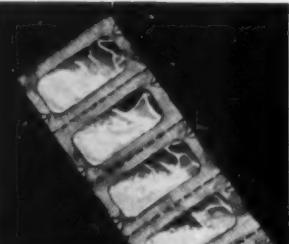
BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation

30 East 42nd Street, New York 17, N.Y.
In Canada: Bakelite Company
Division of Union Carbide Canada Limited
Belleville, Ontario

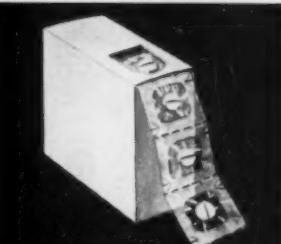
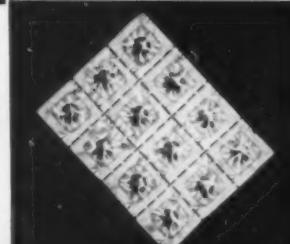
YOUR PRODUCT—PACKAGED AS YOU WANT IT

IN **IL** **SUPER-SEALTITE**

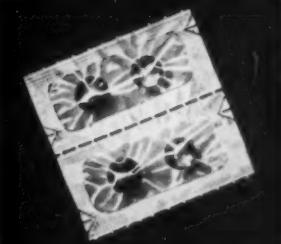
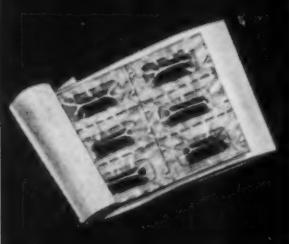
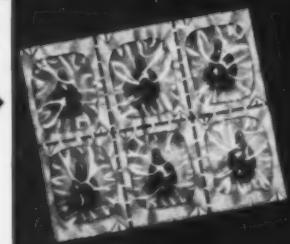
POWDERS



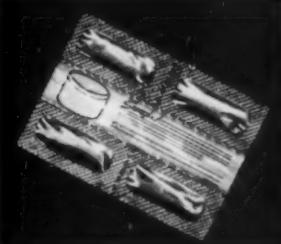
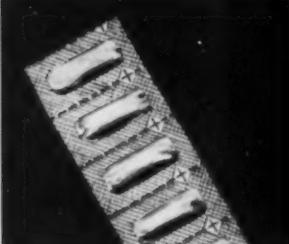
TABLETS



CAPSULES



CREAMS

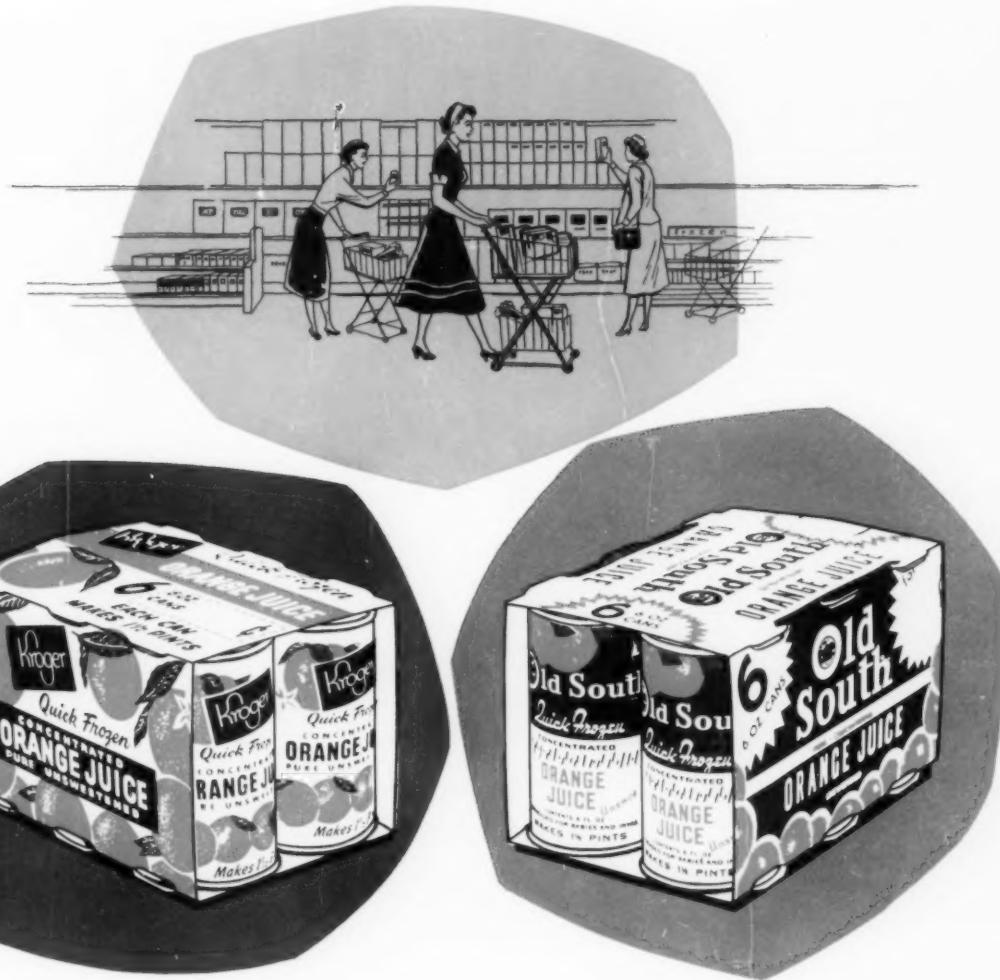


In ones or twos or twenties . . . round or square or oval . . . as creams, powders, tablets or capsules—Ivers-Lee packages them all exactly as you want them.

Yet I-L packages all with the exclusive features of I-L Super-Sealtite*—features with which Ivers-Lee alone can provide you . . . the superlative advantages of Feather-Lite Tear and Double Diamond Tear Notches*—complete, absolute protection and positive consumer acceptance.

UNIT-PACKAGING HAS BEEN OUR BUSINESS FOR OVER 34 YEARS

*Pats. and Pats. Pending



A New Ally for Super Market Sales

Ring up another success story for Dacam multiple pack carriers. Canned fruit juice concentrates are the latest product to adopt this new, powerful sales booster. Market tests prove they increase sales substantially, especially in the important super store outlets.

If your canned product lends itself to a multiple pack, get the full story now on the Dacam cartoning system. No capital investment required. Automatic cartoning machinery comes with your carton order. Keep pace with modern merchandising with Old Dominion supplied Dacam carry home cartons.



DACAM SALES DIVISION CHARLOTTE, NORTH CAROLINA



MIRACLE MEDIUM

WIPES OUT

- SPACE COST
- TIME COST

Here's the opportunity to blast off to your heart's content about your products with...

"On-to-Sta"

4 COLOR

Every carton and package that leaves your plant can now be a colorful advertising vehicle for you. You advertise free when you seal securely with low cost "On-to-Sta" 4 Color Printed Tape. Dress up your packages and cartons with eye and sales appeal.

- A single roll of 600 feet contains 600 twelve inch messages.
- The standard colors are yellow, red, blue and black.
- Our creative art staff will prepare distinctive designs to fit specific needs. Free ideas and sketches submitted with 25 bundle orders.

AN IDEAL SEALING TAPE

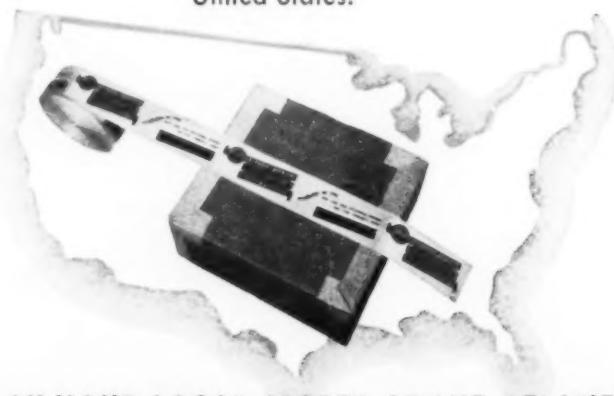
- Your packages are padlocked with your company's name—they're pilferage proof.
- Dust and dampness are locked out.
- Top quality sealing tape that's easy to apply, non-curling, uniformly tenacious.

AN ATLANTIC PRODUCT
"STICKS TO THE LAST"

PRINTED GUMMED
KRAFT SEALING TAPE

a colorful
advertising
medium

- Now being used by manufacturers and distributors throughout the United States.



ASK YOUR LOCAL JOBBER ABOUT ATLANTIC'S
4 COLOR TAPE, OR CONTACT US DIRECTLY

ATLANTIC GUMMED PAPER CORPORATION
PRINTED TAPE DIVISION
1 MAIN STREET • BROOKLYN 1, N.Y.

BRANCH OFFICES: PHILADELPHIA • PITTSBURGH • CHICAGO • BUFFALO • BOSTON • HAVANA



Soft touch for textiles

Textiles should be seen—and not hurt. That is why PLIOFILM has been so outstandingly successful as a textile wrap.

PLIOFILM is transparent, providing natural visibility without glare or highlights. And PLIOFILM is tough and strong, takes plenty of counter abuse without soilage or breakage.

In addition, PLIOFILM has a velvety softness

which makes it ideal for wrapping such textiles as sheets and pillowcases.

What do you need in a packaging material? Strength, transparency, moisture-control? You'll find all of them in PLIOFILM. The Goodyear Packaging Engineer will be glad to help in designing a PLIOFILM package specifically for your product. Write Goodyear, Pliofilm Dept. U-6418, Akron 16, Ohio.

Pliofilm, a rubber hydrochloride—T. M.
The Goodyear Tire & Rubber Company, Akron, Ohio

Pliofilm ONE OF THE
GOOD **YEAR**
PACKAGING FILMS

IMPULSE APPEAL



Vibrant color . . . the sensory appeal of warm lightness . . . the promise of convenience . . .

THAT'S THE PLAXPAK® BOTTLE.



PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES

REPEAT APPEAL



A magnet at the point-of-purchase . . . an aid to your product at the point-of-use . . . it sells, then resells . . .

THAT'S THE PLAXPAK BOTTLE.



PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES

USE APPEAL



The infinite ease of a one-hand squeeze . . .

the perfect safety of unbreakability . . .

THAT'S THE PLAXPAK BOTTLE.



PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES



The Plaxpak polyethylene bottle is packed with merchandising magic. And Plax alone has the experience to exploit this magic to its fullest in behalf of your product. Our packaging staff is at your service — For packaging that sells at the point-of-sale and resells at the point-of-use.

PLAX CORPORATION

WEST HARTFORD, CONNECTICUT

Plax Canada, Ltd., Montreal & Toronto

For the
sparkle
that clinches
the sale...



TRANSPARENT FILM
by Clopay Corporation

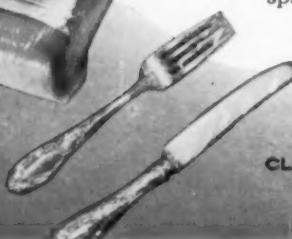
Catch the eye . . . show 'em why . . . make 'em buy . . . package your product in sparkling clear CLOPANE, the new low-cost vinyl film. Now the plastic film that makes products look attractive, is attractive price-wise, too.

CLOPANE is what manufacturers have long desired—a low-cost, glass-clear vinyl film that is tough, flame-resistant, non-yellowing, won't get brittle and is easily sewn or heat sealed.

Garments, appliances and hundreds of other items sparkle with sell . . . look "touchable" yet remain protected . . . under glass-clear CLOPANE.

Write today for complete information and samples of CLOPANE, the new, miracle sparkling clear vinyl plastic film.

UNRETOUCHED PHOTOGRAPHS



CLOPAY corporation

CLOPAY SQUARE

CINCINNATI 14, OHIO

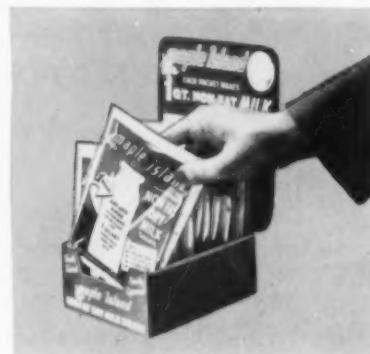
So many packaging problems

Du Pont ALATHON*

POLYETHYLENE RESIN



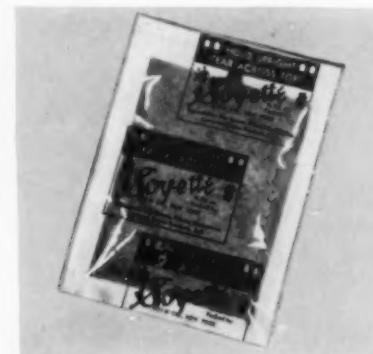
A CONVENIENT PACK that could protect tobacco from drying out was a merchandising "must" for this pipe-tobacco company. Solution: handy pocket pouch of 50-lb. bleached sulphate paper coated with "Alathon," laminated to .00035" aluminum foil. Tobacco stays fresh all the way.



POWDERED MILK cakes when it absorbs moisture, so this package had to form an effective moisture barrier with a strong heat seal. Solution: a laminated pouch of sulfite paper and aluminum foil with a 1½-mil inner coating of "Alathon." This pouch keeps its powder dry!



LITERALLY EATEN AWAY by the humus—which has 60% moisture content, as well as active bacteria—conventional packages deteriorated in days. Bags rotted on dealers' shelves. Solution: a bag of 50-lb. wet-strength kraft, coated with "Alathon." This humus bag can be stored for months!



A SINGLE-SERVICE POUCH for soy sauce called for a difficult combination of properties—resistance to deterioration from food oils, plus strength, flexibility and heat sealability. Solution: a special glassine pouch with a 3-mil coating of "Alathon." Now soy sauce is in the bag!



KEEPING COOKIES CRISP and fresh had been achieved with an inner liner and an over-wrap—which made packaging costly. Solution: this .020" boxboard carton with an inner coating of "Alathon." Grease- and moisture-resistant "Alathon" makes both overwrap and inner liner unnecessary.



WARM-WEATHER SEEPAGE of oil and grease left unprotected lard packages stained and unattractive in stores in the South. Solution: an inner wrap of 30-lb. bleached kraft with a 1½-mil inside coating of "Alathon." This package stays clean and fresh-looking, attracts shoppers!



QUICK-FREEZING TEMPERATURES caused cracking of the coating . . . meat's natural juices caused weakening of the package. Solution: an inner liner of 40-lb. wet-strength kraft with a 1½-mil coating of "Alathon." "Alathon" stays tough and flexible down to 100°F. below zero!

are solved with coatings of



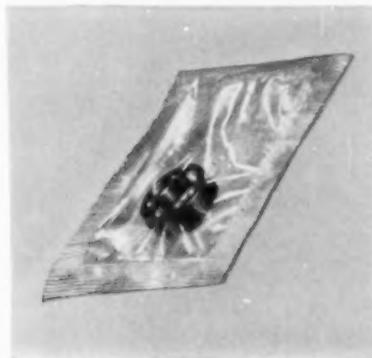
SHORTENING WOULD "BLEED" through ordinary multi-wall bags, and this flour mix is high in shortening content. Loss of shortening would hurt product quality. Solution: a multi-wall valve bag with 20-lb. coating of "Alathon." Shortening doesn't "bleed" through, even at warm bakery temperatures.



PROTECTION FROM MOISTURE seemed to demand bulky, costly-to-ship containers for this powdered weed killer. Solution: a multi-wall paper bag with a 1 1/2-mil inside coating of "Alathon" and an outer ply of 60-lb. wet-strength kraft. Now handling, shipping and storing are easy, even in humid climates.



KEEPING OXYGEN OUT and moisture in was necessary if this frozen orange juice was to maintain truly fresh-fruit flavor and nutrition. Solution: a pouch of cellophane laminated to .002 inch of Du Pont "Alathon." Now drugstore and luncheonette fountains stock a glassful of juice in a bag!



EXTRA PROTECTION for ball bearings was sought by a manufacturer. He wanted lubricated bearings individually wrapped to keep oil in, dirt and moisture out. Solution: a glassine pouch coated inside with "Alathon." An extra benefit is transparency, which makes sorting by sizes easy.



SIFTING INTO SEALING AREA, super-fine surgical powder slowed down high-speed packaging, weakened seals. Solution: pouch of 21-lb. paper with 1/2-mil inside coating of "Alathon." Besides giving trouble-free, sift-proof heat seals, "Alathon" stands up to sterilizing temperatures.



A SALES-BUILDING consumer package for dill pickles was the aim of a manufacturer who foresaw the death of the old pickle barrel. Problems faced included moisture, breakage and acidity. Solution: a laminated pouch of cellophane and "Alathon." Handiness and transparency boost sales, too!

In each of these cases, the product is better looking, better selling, better protected, more economical to package, or more convenient to use because of a coating of Du Pont "Alathon" poly-

ethylene resin. And these same advantages can help you fill your own packaging needs.

To get more detailed information on Du Pont "Alathon," mail the coupon below today.

*REG. U. S. PAT. OFF.

DU PONT
Polyethylene Resin
ALATHON
Polyethylene Resin
BETTER THINGS FOR BETTER LIVING
THROUGH CHEMISTRY

Which type of
package are you
interested in?

- Multi-wall bags
- Single-ply bags
- Pouch bags
- Board cartons
- Board trays
- Fiber drums
- Corrugated boxes
- Fiberboard containers

E. I. du Pont de Nemours & Co. (Inc.)
Polychemicals Dept. 519, Du Pont Bldg.
Wilmington 98, Delaware

Please send me information on the properties and advantages of "Alathon" polyethylene resin for the type(s) of packages I have indicated.

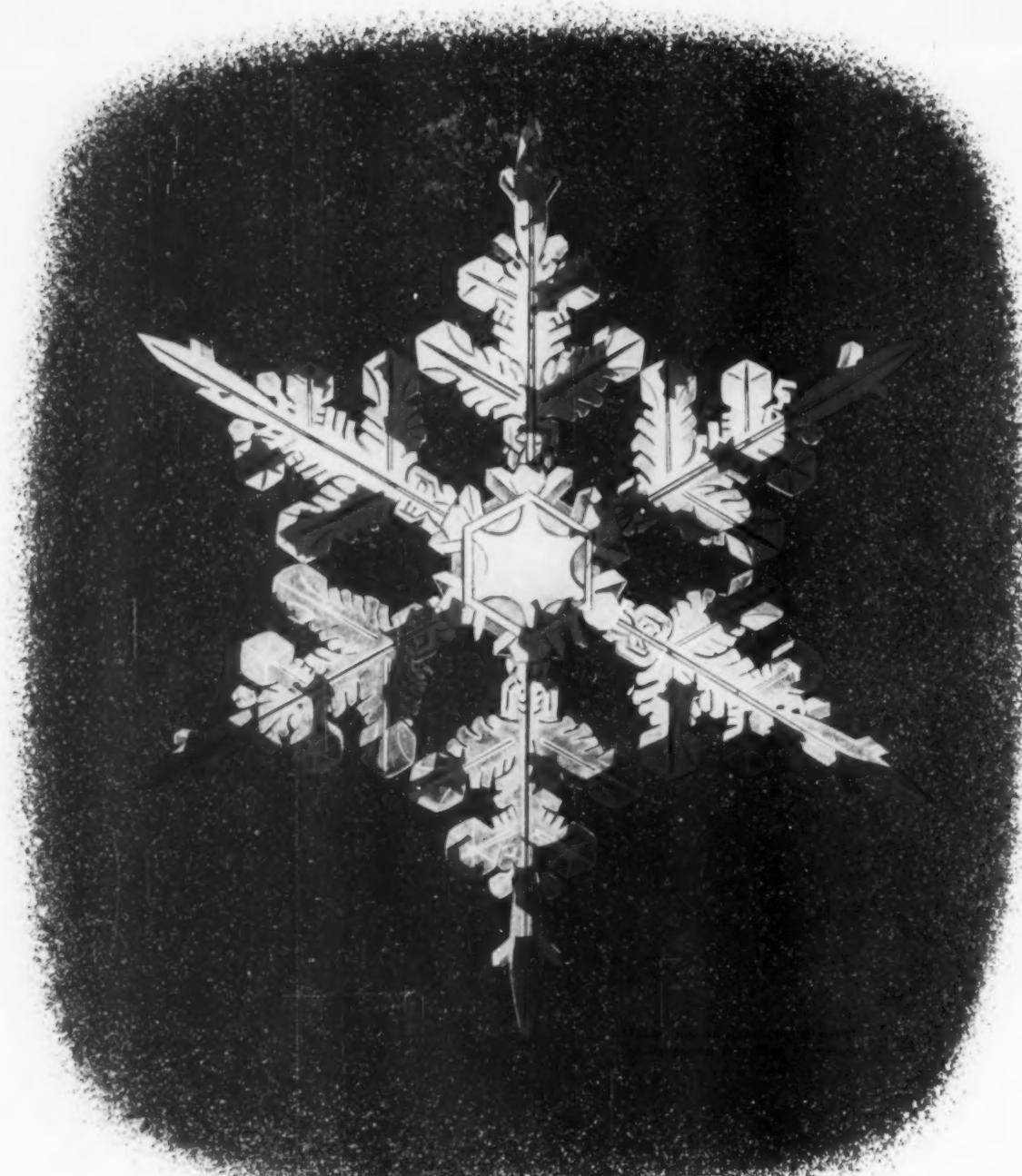
Name _____

Title _____

Company _____

Address _____

City _____ State _____



FIBREBOARD is expert at frozen food packaging, too.



FIBREBOARD PRODUCTS INC.

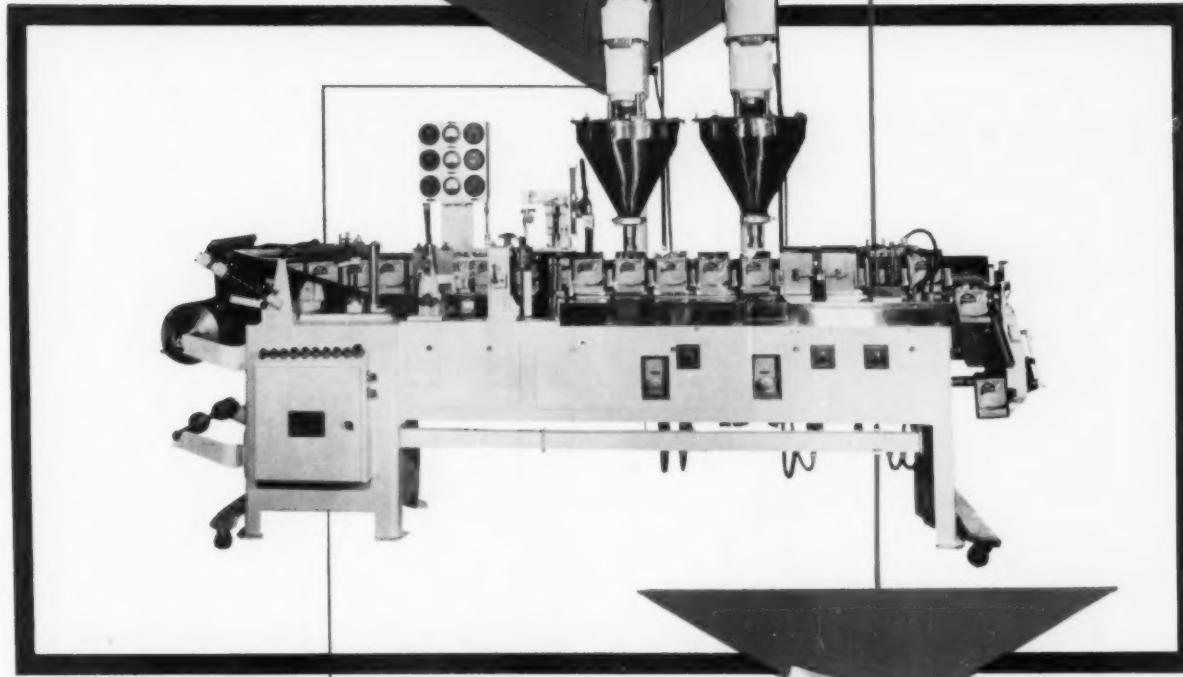
Head Office: San Francisco 11, California

FIBREBOARD PRODUCTS (EASTERN DIVISION) INC.

Philadelphia and Baltimore

Sales Offices: (West) Boise • Denver • Fresno • Los Angeles • Dallas • Oakland • Phoenix • Portland • Sacramento • Salem • Salinas
Salt Lake City • San Diego • San Francisco • San Jose • Seattle • Stockton • Yakima; (East) Baltimore • Boston • Lancaster • New York • Philadelphia • Reading

SALES-WINNING PACKAGE... Made Automatically at Low Cost!



To meet the terrific consumer demand for 7 Minute Frosting, the 6 O'clock Food Company uses high speed automatic Bartelt Machines to form the envelope, fill, and seal their product in a colorful, attractive foil package. The Bartelt basic machine is perfectly suited to meet these rigid requirements. The new Bartelt Fillers mounted on the base machine proved to be superior for handling the Frosting in powder form.

Bartelt can help you with your packaging problems. In addition to the basic machine and to their new filler, Bartelt can furnish cartoning equipment to be added to their base machine. Write for assistance with your packaging problems today.

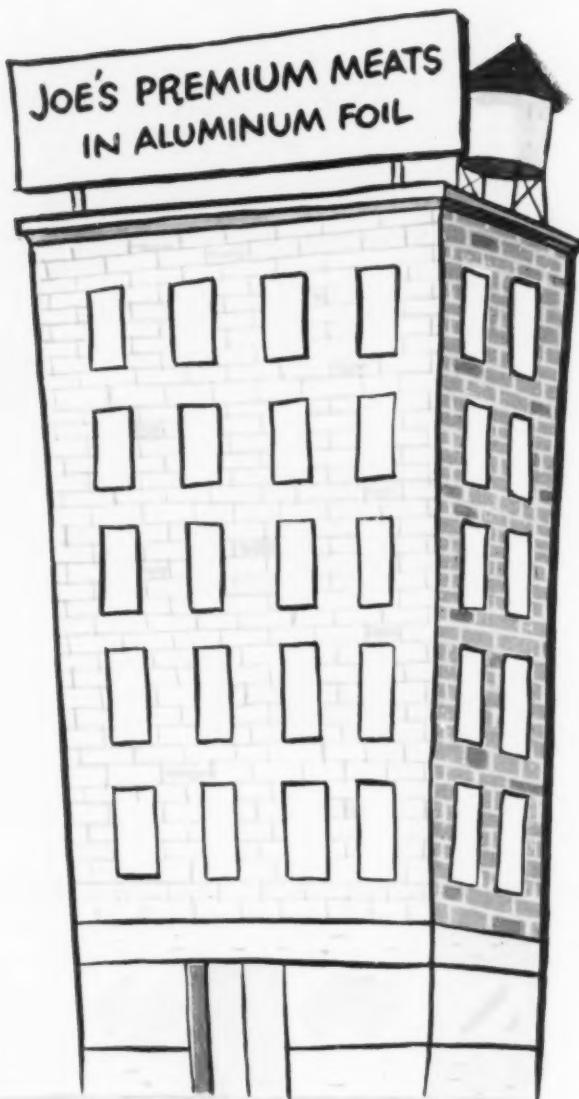
NEW BARTELT FILLER AVAILABLE
AS A SEPARATE ITEM



BARTELT
ENGINEERING CO.
1900 HARRISON AVENUE
ROCKFORD, ILLINOIS

*Machinery for
Creative Packaging*

HOW TO GROW LIKE JOE



JOE'S ANSWER TO COMPETITION is aluminum foil packages that give *extra* protection to his product—thus permit distribution over greater distances to *profitable new markets*.

If you want to step ahead of competition, as more and more progressive meat packers are doing, package your product in aluminum foil which provides all these advantages:

FLAVOR PROTECTION—Aluminum foil is non-porous, seals in flavor, seals out damaging air and moisture. Reflects heat and light. Imparts no flavor. Prolongs shelf life.

SALES APPEAL—Eye-catching aluminum foil gets attention for your product on the shelf or in the refrigerated case. Makes your product more desirable to customers, because it reflects the quality it protects!

PRODUCTION VERSATILITY—Foil is pliable, easy to handle, easy to print on. Takes economical and reliable heat seal. Can be printed, colored, coated, embossed, combined with other materials. Superior cold transfer characteristics for frozen foods.

WE DON'T MAKE PACKAGES, BUT . . . There are many leading converters eager and qualified to tackle your packaging problem with you. These converters rely on Kaiser Aluminum as a major supplier because we are an integrated operation, producing foil of unsurpassed quality in a wide range of specifications. Our Engineering and Development Division is available to work closely with converters and with you.

For names of leading converters contact any Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., General Sales Office, Palmolive Bldg., Chicago 11, Ill.; Executive Office, Kaiser Bldg., Oakland 12, Calif.

Kaiser Aluminum

setting the pace—in growth, quality and service

MODERN PACKAGING

CICERO on the supremacy of the people

Only in states
in which the
power of the people
is supreme
has liberty
any abode

(De Republica, c.50 B.C.)

Art: Don Kubly

Container Corporation of America 

Lightning...in a Steel Jacket!

2 Billion

1 Billion



Over TWO BILLION Steel Jackets and Tops Made by J. L. Clark for Ray-O-Vac

How many are TWO BILLION lithographed steel jackets and tops for Ray-O-Vac LEAK PROOF brand batteries? . . . Enough to circle the earth twice, almost, if you laid them end to end. Enough to equal the weight of 312 steam locomotives, if you total the steel they used! You could count 24 hours a day for a lifetime and never approach 2,000,000,000. Yet this astronomical number of components for the famous Ray-O-Vac battery has come from J. L. Clark's smooth flowing production lines!

It all started when Ray-O-Vac came to J. L. Clark with the question: Could steel jackets and tops be produced — economically—for a new kind of battery that was guaranteed against leakage, swelling or corroding, ending forever the scourge of flashlight damage? And the answer has come, 2 billion times, in the famous cell now known the world over as "sheathed in steel."

Clark Complete Metal Packaging Service provided the answer . . . developed ways to lithograph and fabricate steel battery components at a price permitting Ray-O-Vac to meet competition using less costly materials. It took new ideas to do this . . . new tools and techniques of fabrication . . . special provisions to insure unusual accuracy. It took the same kind of creative engineering that J. L. Clark has applied to other manufacturers' problems for half a century.

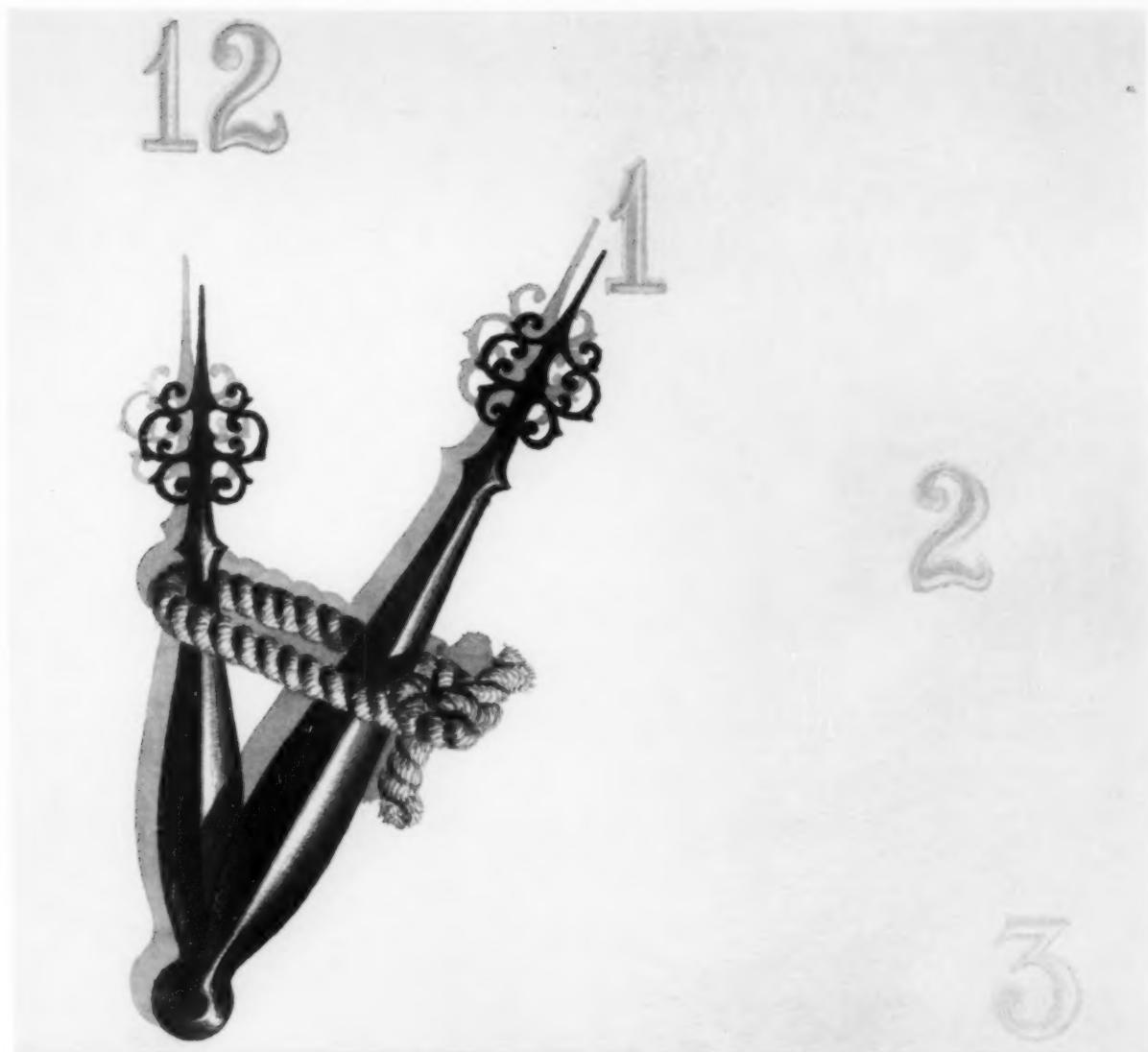
If you have a problem in product packaging, we suggest you remember this story — and remember, too, that J. L. Clark lithographed metal containers carry a wide variety of products — from baby powder to water color paints . . . from ointments to cellophane tape or razor blades, and a host of others. Why not write today for information on packaging tailored to your specific needs?

J. L. CLARK MANUFACTURING COMPANY, ROCKFORD, ILLINOIS



LITHOGRAPHED METAL CONTAINERS

OUR 50th YEAR OF QUALITY • 1904-1954



Time stands still inside your package . . .

Does every tick of the clock rob your product of a fractional share of its original goodness?

If your product is painstakingly perfect the day you pack and ship it, will oxidation, moisture or light steal some of that goodness before it reaches the consumer?

Such loss need not occur . . . not in this age of scientific packaging. Today's packaging engineer has dozens of flexible materials to choose from. Each has its own unique protective characteristics. By com-

bining several layers of these materials into a single sheet, Acmeflex allows you to handpick the protective qualities you need.

Acmeflex is available in an almost unlimited range of combinations . . . transparent films, metallic foils, plastic-coated papers, combinations of all three! You specify the protective and visual goals of your packaging, we do the rest. Acmeflex can be printed to your specifications and is delivered on webs for high speed packaging equipment.



SEND FOR THE ACMEFLEX CATALOGUE today. It contains samples of typical Acmeflex combinations together with their protective specifications.

ACME BACKING CORPORATION
Meadow and Bogart Streets, Brooklyn 6, N. Y.

ACMEFLEX

The barrier packaging that defies the elements.

Nearing completion at Rome, Georgia ...a new source of paperboard

for you



MEAD
board

In a very short time now wheels will start turning in the huge new kraft mill shown above—and you will have another dependable source of supply for all your paperboard needs.

You, a fabricator of corrugated containers, will appreciate, we're sure, the future advantage to you of this additional source of paperboard supply. For the past ten years paperboard consumption (exclusive of building board) has been increasing at an average rate of almost half a million tons annually. And no demand letup is in sight.

The brand-new plant, modern in every respect, will enable us to more than double our production of Mead Kraft Liner. Fabricators who want strength and rigidity with light weight and economical cost find Mead Kraft Liner and Mead .009 Chestnut Corrugating Medium combine well to suit their needs.

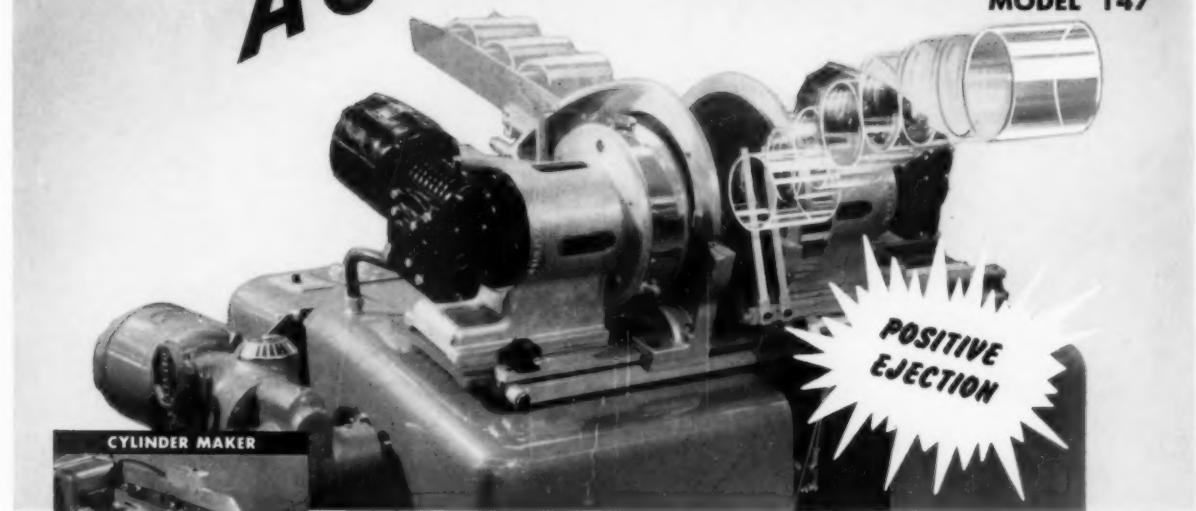
Mead Board is a standard product of
THE MEAD CORPORATION
and is sold direct by

Mead Board Sales, Inc.
3347 Madison Road, Cincinnati 9, Ohio
6124 No. Milwaukee Ave., Chicago 30, Ill. • 10 Commerce
Court, Newark 2, N.J. • 18045 James Couzens Highway,
Detroit 35, Mich. • 43 Leon Street, Boston 10, Mass.
River Road, Lynchburg, Va.

The New Taber

AUTOMATIC CYLINDER BEADER

MODEL 147



Beads up to 900 cylinders per hour AUTOMATICALLY... operator merely fills chute

Now, Taber presents the first, the finest and the fastest ALL AUTOMATIC Cylinder Beader! Completely re-engineered for greater speed, this far faster Beader processes up to 900 cylinders per hour on certain sizes.

This is NOT the semi-automatic type of Beader to which you are accustomed! IT'S ALL AUTOMATIC! The only thing your operator does is feed cylinders into the chute. The machine does everything else *perfectly*, even to automatic ejector which tosses finished cylinder into convenient hamper.

Team up this new Taber Beader with the re-engineered Taber Model 138 Cylinder Maker and ONE operator can run BOTH machines to cut your production

costs. Write us for free folder that will give you all the facts!

The new TABER CYLINDER MAKER *Automatically* sizes cylinders which eliminates all crooked seams and misfitting bodies. The TABER FOLDER does 700 single folds per hour and ELIMINATES tearing and cracking by forming desired fold into permanent shapes under heat. The TABER DOUBLE BEADER beads two edges AT ONCE at HIGH SPEEDS and the TABER CREASER has an "instant-crease" feature that gives MORE right-angle creases in LESS TIME and fewer rejects.

Let us also send you complete information on all the TABER HIGH SPEED Sheet Plastic Fabricating Equipment.

Mail this Coupon
FOR FREE LITERATURE

Taber

INSTRUMENT CORPORATION (SECTION 12)
111 GOURDY STREET • NORTH TONAWANDA, NEW YORK

Please send literature on items checked CYLINDER BEADER CYLINDER MAKER
 PLASTIC FOLDER DOUBLE BEADER PLASTIC CREASER

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

TWO walls are better than one!



Announcing the NEW DUPLEX Polyethylene SHOWBAG*



It is a scientific fact that 2 sheets of polyethylene, equivalent in total weight to a single sheet of polyethylene, have 25% more strength, because of the double surface resistance. This means that you can *save substantially* in material cost, on your plain or printed polyethylene bags, and still have the same strength.

Our new Duplex polyethylene SHOWBAG may be the answer to your packaging problem where packaging strength is required at low cost.

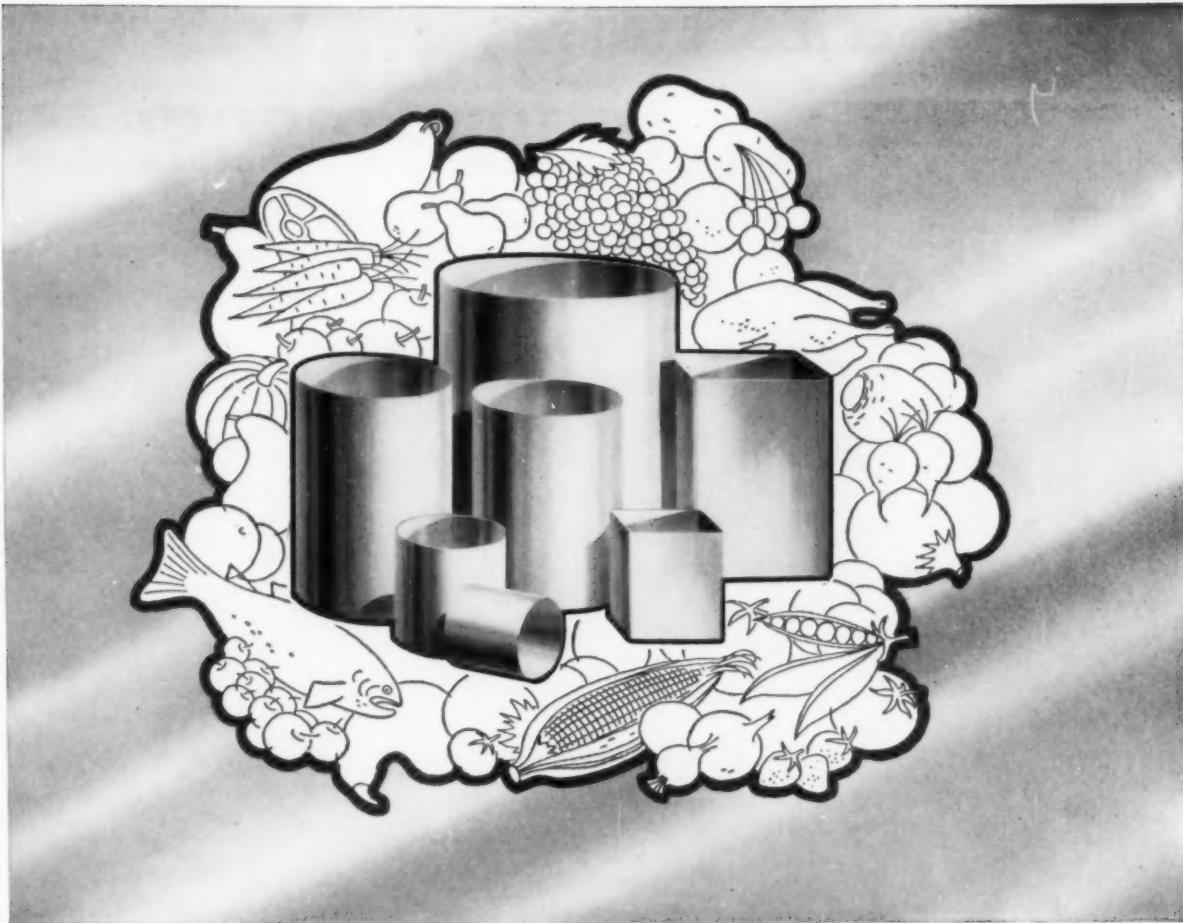
Send us your product — our packaging designers will recommend the ideal solution.



CENTRAL STATES
PAPER & BAG CO.
5221 NATURAL BRIDGE

ST. LOUIS 15, MO.

Offices in Principal Cities • Plants in: ST. LOUIS • BEACON, N. Y. • SALT LAKE CITY • AUBURN, WASH. • PALATKA, FLA.



Partners in **DEPENDABILITY**

Modern TIN PLATE by J & L

J&L Tin Plate provides dependability resulting from the skill and accuracy of modern steelmaking.

Steel quality and tin plating are very carefully controlled . . . and, exceptionally strict standards of inspection are maintained at all times. J&L Tin Plate conforms consistently to the specifications of can makers and packers who protect their products with tin containers.

**SERVICE
TO YOUR
MEASURE**

1. Your orders are handled promptly and efficiently. You receive J&L Tin Plate *as promised*.
2. Your stock of J&L Tin Plate can be maintained at the levels that fit *your* needs.
3. You may have the assistance of J&L metallurgists to help solve your technical problems.

**J&L
STEEL**

Jones & Laughlin
STEEL CORPORATION — Pittsburgh

Modern TIN Containers

Modern tin containers provide protection for the products they carry safely to market. They make possible the distribution and marketing of a large percentage of our foods, oils, paints, beverages, and other products.

This most dependable type of packaging begins with the production of good tin plate. It is completed by the skill of the modern can-makers.

No need to fish for

compliments, when

*the drinks are prepared with Guckenheimer.**

*Men who appreciate a really fine
whiskey go for Guckenheimer, made
for today's modern taste.*



THIS product is sealed with the Crown Screw Cap. It also has a cellulose outer seal for additional protection.

The Crown Screw Cap with liners selected especially for the product, and with an alcohol-resisting inside coating makes an excellent seal for liquors and wines. It's easy removal, and fine re-sealing features make this closure popular with consumers.

When you're preparing to order closures again . . . check with your Crown Closure Representative before you do. And when discussing Crown Closures ask about the Vinylite Spot Inaseal, too. Crown Cork & Seal Company, Inc., Closure Division, Baltimore 3, Maryland. *World's Largest Maker of Metal Closures.*



** Guckenheimer Whiskey is
blended and bottled by
The American Distilling
Co., Inc., Pekin, Illinois
and Sausalito, California.*

CROWN CLOSURES

Approved by millions of housewives



Ho 11375
of polieth
aluminum foil
Our products

rights



- QUALITY
- SERVICE
- LEADERSHIP

ALUMINUM FOILS, INC.



Only SNAKE TAPE is Rayon reinforced for greater shock resistance!



Center-seam sealing
with Snake Tape is

- At least 30% stronger!
- Two-thirds faster!

Here you see how just one strip of Diamond Back Snake Tape seals heavy cartons of paint.

SEALED STRONGER because — with Snake Tape — reinforcing yarns of *rayon* absorb the shock of impact.

SEALED FASTER because — with Snake Tape — only one strip is used to give a stronger closure.

Center-seam sealing cuts costs for others — It may be an idea for you! Send for free Snake Tape sample.



Improved Snake Tape is made to seal heavy telescopic cartons like these. That's because diamond reinforced Snake Tape is made to resist down tear and cross tear! Ideal, too, for rolls and odd shapes because Snake Tape combines *flexibility* with amazing strength and shock-resistance. Choice of five widths: 1½", 2", 2½", 3" and 4".

Dual rayon edge yarns
for cross tear strength



Diamond mesh rayon
yarns for longitudinal
and torque strength

No other reinforced gummed tape is made with high tenacity *rayon* yarns . . . the same strong, resilient reinforcing used in auto tires to absorb road shock. Snake Tape sealed cartons absorb heavy impact without breaking!

Genuine Diamond Back Snake Tape gives you extra shipping insurance at lowest cost. It is asphalt-laminated for waterproofness; Snake Tape cannot be soaked off — a real protection against pilferage. Send now for complete facts and . . .

Free sample IMPROVED SNAKE TAPE

Angier Corporation, Framingham 11, Mass.

*Protective Papers for Industrial,
Building and Farm Needs Since 1895*

Please send free test sample of Angier Snake Tape and complete facts.

Name

Title (sign and clip to letterhead)





Handy, hardy & handsome
Another Case for U. S. Royalite!

Time was when a "portable" radio was about as easy to carry as a suitcase. But this one's actually "pocketable"! *New materials*, like midget-size radio tubes, and tough, lightweight *U. S. Royalite*, make this marvelously compact Sears, Roebuck & Co. radio possible.

This new *U. S. Royalite* housing is extremely thin and lightweight, yet so tough and hardy it defies breakage—even if dropped! And it has a richly grained surface, with built-in color that can't peel, chip, or scratch off.

What's more, this attractive *U. S. Royalite* case is quickly and easily formed in two sections by matched metal molds—takes and holds sharp mold details for lasting beauty.

You can see the case for *U. S. Royalite* is a *strong* one. With its great toughness, high dimensional stability, resistance to most chemicals, clean good looks and pleasant feel, and ability to be as hard or flexible as the case demands, *U. S. Royalite* might well be just the solution to *your* case.

Why not find out about it? It's as easy as writing to the address below.

U.S. ROYALITE
 TOUGH PLASTIC PRODUCTS



UNITED STATES RUBBER COMPANY
 2638 NORTH PULASKI ROAD • CHICAGO 39, ILLINOIS



New Stars for MODERN PACKAGING

Competitive markets today require stand-out products to capture shoppers' attention and create the desire to buy. CAMP's *Custom Laminating and Waxing Service* offers all the manufacturing know-how of 65 years technical experience and skill.

The key to CAMP's reputation for Highest Quality Product and Service will open the door to increased sales of your products. Send your *laminating and waxing* specifications today to



RICHMOND DIVISION
P. O. BOX 1598
RICHMOND, VIRGINIA

CUSTOM LAMINATING WAXING & COATING

Foils, Films, Paper

For

BAGS—Potato Chip, Candy,
Frozen Food

LABEL STOCK

LINERS—Candy-box, cases

COVER & CARTON STOCK—

Matchbook carton

WRAPS—Gift, candy, butter

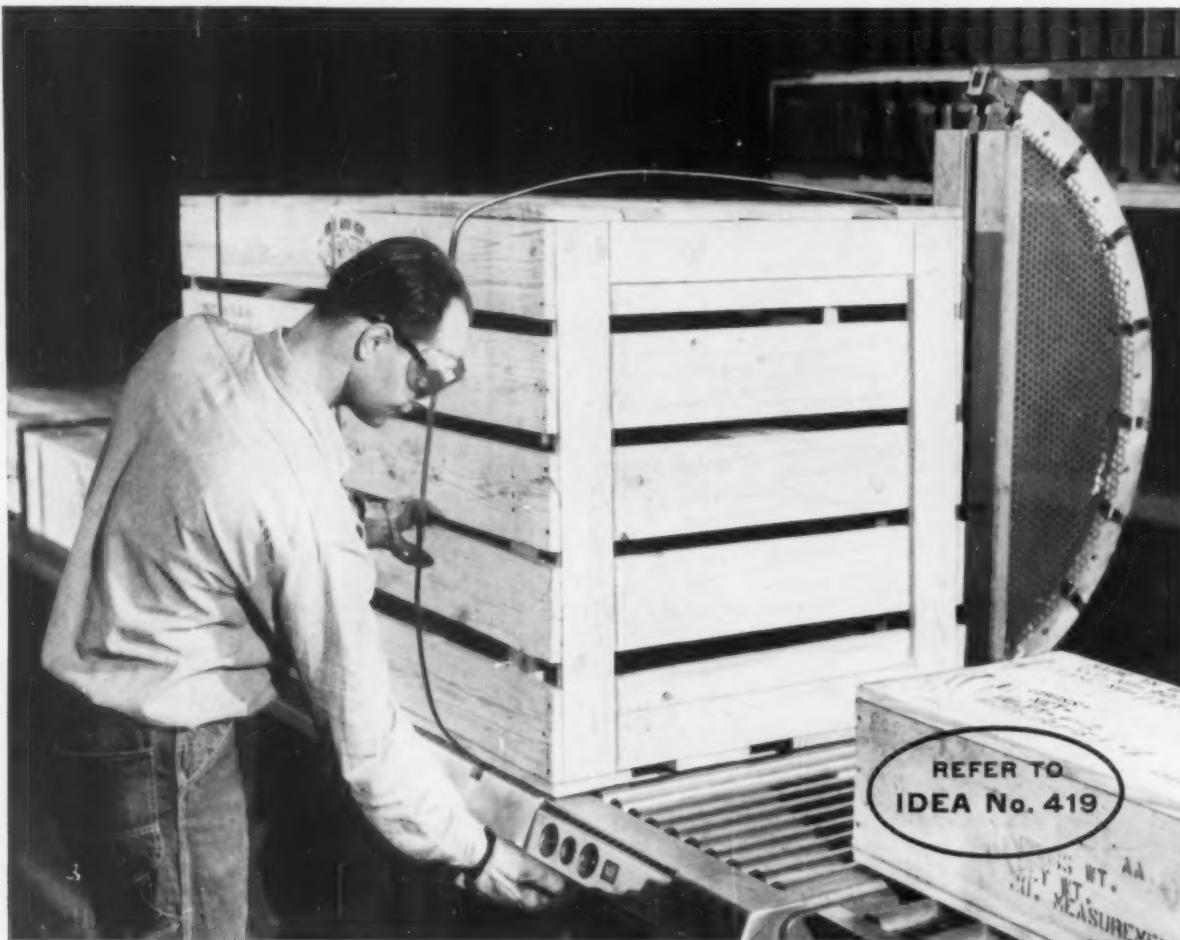
OVER WRAPS

SEAL & TAG STOCK

WAXING (to your specifications)

FLEXOGRAPHIC PRINTING

Film, foil, (roll-to-roll & sheets)



AIM* for PRODUCTION-LINE PACKAGING with Acme Steel Strapping Machines



ask your
***Acme Idea Man**
to help solve your
problems

Acme Idea Man,
Harold Schultz of
Detroit, worked with
Chrysler officials
in setting up this
packaging system.

Industry is discovering new economies in time and money where centralized strapping operations have been made automatic. Acme Steel Strapping Machines, for example, help maintain the continuous flow of overseas shipments at the Chrysler Corporation plant at Marysville, Michigan (Idea No. 419). Here, the size or shape of the container makes little difference in moving export boxes and packages hour after hour through the machine . . . automatically tensioning, cutting and welding the strapping.

There is a place for Acme Steel Strapping Machines wherever fast, easy application of steel strapping is required on a continuous, volume basis. Ask your Acme Idea Man for complete details. Or, write Acme Steel Products Division, Dept. GG-94, Acme Steel Company, 2840 Archer Avenue, Chicago 8, Illinois.

AIM For Safe, Lower-Cost Shipping

ACME
STEEL
CO.
CHICAGO

**ACME
STEEL**

A WORLD OF SIZES AND TYPES



**when you choose the world's largest manufacturer
of cylindrical plastic containers**

You name the exact size and type plastic container you need to package your product. *We'll supply it!* Chances are, in the tremendous variety of containers we now produce, there is one that will fit your particular needs perfectly. If not, simply supply us with your specifications and we'll produce special sizes for you.

Clearsite Transparent Plastic Containers are tailor-made for your product in many other ways. There are a wide variety of closures available, and your lettering, design or trade mark can be permanently printed in any color right on the containers.

Besides variety and versatility, you enjoy many other advantages when you use Clearsite. They're moisture-tight, dust-proof, and gleaming bright with complete transparency. They're feather-light, only about $\frac{1}{5}$ the weight of glass.

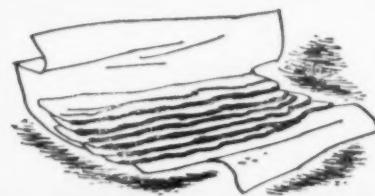
Write for free samples and descriptive literature today!

CELLUPLASTIC CORPORATION

General Offices: 50 Avenue L, Newark 5, N. J.



It's Grease-resistant!



Meats, butter, lard and other moist foods are completely protected when they're packaged with West Carrollton Genuine Vegetable Parchment. It's *grease-resistant*—greases and oils can't penetrate it.

Protect your product with this pure vegetable parchment that is Odorless, Tasteless, Insoluble, Grease-resistant and Strong (wet or dry). We're ready to design and print exactly the wrapper *you* need, in attractive colors, using special inks. Write us.

West Carrollton
GENUINE VEGETABLE
Parchment

WEST CARROLLTON PARCHMENT COMPANY

WEST CARROLLTON, OHIO

SALES OFFICES: New York, 99 Hudson St. • Chicago, 400 West Madison St.

DRY WAXED
PARCHMENT

BUTTER WRAPPERS

BUTTER TUB LINERS
& CIRCLES

BUTTER BOX LINERS

BAKERY PAN LINERS

MILK & ICE CREAM
CAN TOPS

SLICED BACON
WRAPPERS

VEGETABLE
SHORTENING
CARTON LINERS

LARD CARTON LINERS

FRESH FILLET WRAPPERS
& INSERTS

CELERY WRAPPERS

MEAT WRAPPERS

LINERS FOR MEAT TINS

POULTRY WRAPPERS

CHEESE WRAPPERS

TAMALE WRAPPERS

RELEASE PARCHMENT

TRI-3-WRAP FOR
SMOKED MEATS

MARGARINE WRAPPERS

MANY OTHERS

A NEW WATER-REDUCIBLE HIGH-GLOSS Aqualox Overprint Varnish



FLEXOGRAPHIC PRINTERS ACCLAIM NEW IPI AQUALOX
FOR ITS AMAZING ECONOMY AND RUB-RESISTANT GLOSS
ON CARTONS AND KRAFT AND SULPHITE STOCKS

Ideal for cartons and absorbent stocks, here is IPI's unique new Aqualox *high gloss* overprint varnish, which needs no solvent reducer. Aqualox varnish *reduces with just ordinary tap water*.

It lays smoother . . . prints sharper . . . and not only produces unusual color depth, but retains its sparkle longer. Repeated commercial tests prove Aqualox equal to alcohol and oil base varnishes in durability and rub-resistance.

Aqualox saves you money as well. It needs less attention due to its excellent press stability and greater uniformity. Clean-ups are faster, easier, less costly.

What's more, Aqualox is *safer* to use and there are no unpleasant solvent fumes.

When you next need a *quality* flexographic overprint varnish, first use the varnish that is first: IPI Aqualox—*first* in appearance, *first* in toughness, *first* in economy.

IPI, IC and Aqualox are trademarks of Interchemical Corporation

Interchemical Corporation

PRINTING INK DIVISION • 67 W. 44th ST., NEW YORK 36, N.Y.



INTERCHEMICAL
PRINTING INKS



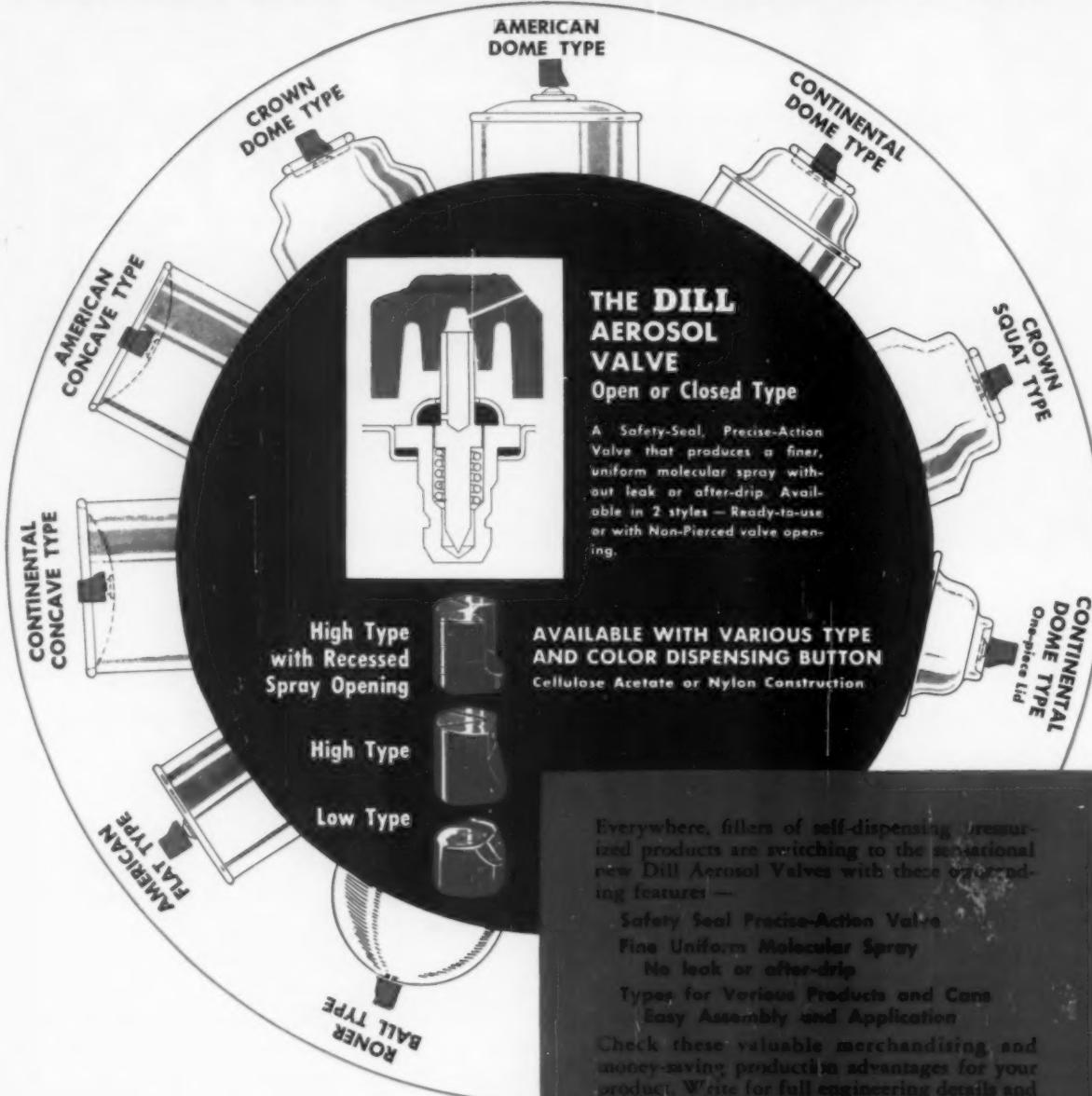
RELY ON IPI FOR LEADERSHIP IN INK RESEARCH

SEPTEMBER 1954

43

FITS ALL TYPE CAN LIDS

Now in Use for Self-Dispensing Pressurized Products



THE DILL AEROSOL VALVE

Open or Closed Type

A Safety-Seal, Precise-Action Valve that produces a finer, uniform molecular spray without leak or after-drip. Available in 2 styles — Ready-to-use or with Non-Pierced valve opening.

AVAILABLE WITH VARIOUS TYPE
AND COLOR DISPENSING BUTTON
Cellulose Acetate or Nylon Construction

High Type
with Recessed
Spray Opening

High Type

Low Type

Everywhere, fillers of self-dispensing pressurized products are switching to the sensational new Dill Aerosol Valves with these outstanding features —

Safety Seal Precise-Action Valve

Fine Uniform Molecular Spray

No leak or after-drip

Types for Various Products and Cans

Easy Assembly and Application

Check these valuable merchandising and money-saving production advantages for your product. Write for full engineering details and test samples.

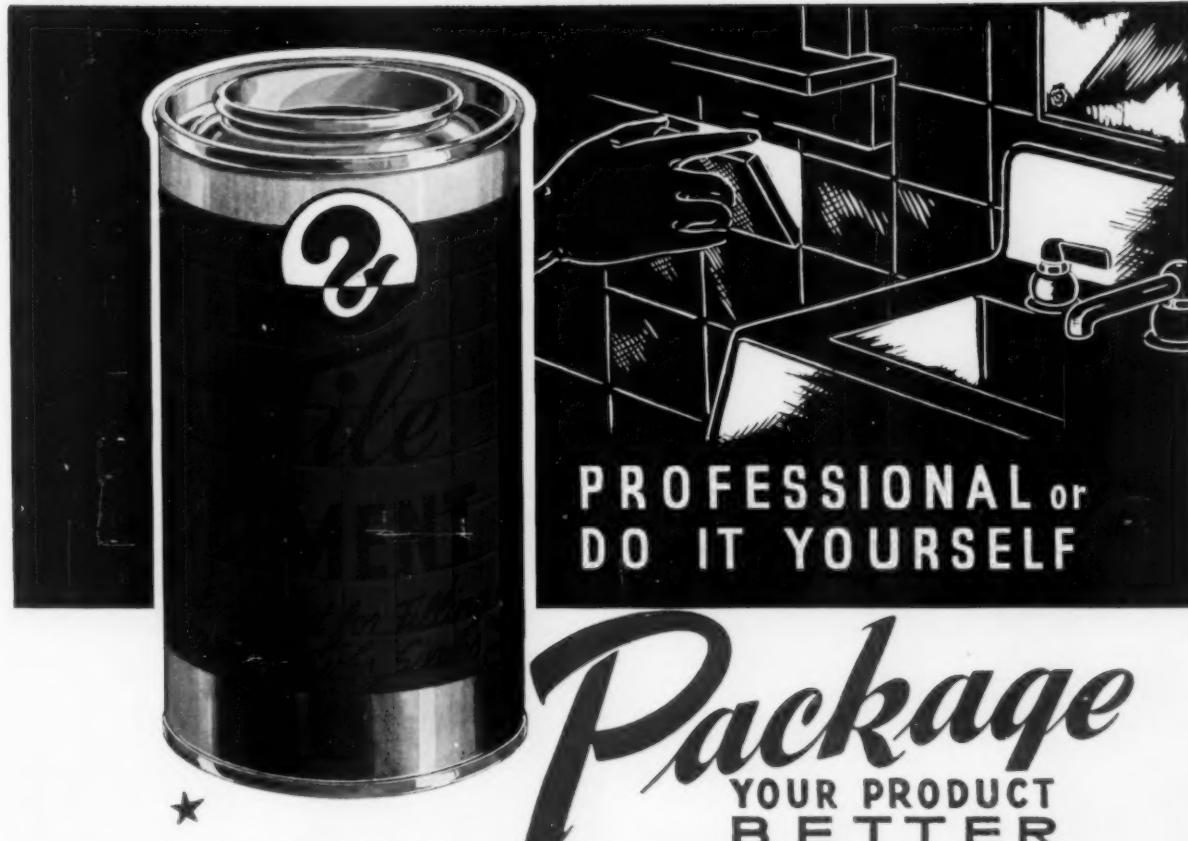
THE DILL MANUFACTURING COMPANY

700 East 82nd St., Cleveland 3, Ohio

DILL AEROSOL VALVES

A PRODUCT OF 45 YEARS'
EXPERIENCE IN THE DESIGN
AND MANUFACTURE OF
SAFETY SEAL VALVES

"TOPS" for Reli-
able Services and
Sales Attraction



Illustrated above is a Cleveland Container friction plug can . . . metal top ring with tight fitting metal lid . . . high quality paper body . . . metal bottom.

★ ★ ★

For our new Packaging Folder, write the Cleveland Container plant nearest you.



CLEVELAND CONTAINERS

are economical . . . practical in construction . . . vibrant in their customer appeal.

There is always a CLEVELAND CONTAINER that possesses the essentials of construction for your needs, particularly where rigidity and strength are required:

Diameters and lengths as desired . . . choice of closures and dispensing tops;

The aptitude for artistic, forceful labeling;

The addition of liners that protect the contents where such protection is required.

EVERY SHIPMENT of Cleveland Containers measures up to your specifications and, likewise, to the expectancy of your customers.

WHY PAY MORE? FOR GOOD QUALITY . . . CALL CLEVELAND!

The **CLEVELAND CONTAINER Co.**

6201 BARBERTON AVE. CLEVELAND 2, OHIO

- All-Fibre Cans • Combination Metal and Paper Cans
- Spirally Wound Tubes and Cores for all Purposes

PLANTS AND SALES OFFICES: Cleveland, Chicago, Detroit, Memphis, Plymouth, Wis., Ogdensburg, N. Y., Jim Thorpe, N. J., Los Angeles • ABRASIVE DIVISION at Cleveland. SALES OFFICES: Grand Central Terminal Bldg., New York City; Washington Gas Light Bldg., Washington, D. C.; West Hartford, Conn.; Rochester, N. Y. Cleveland Container Canada, Ltd. PLANTS AND SALES OFFICES: Toronto and Prescott, Ont. • SALES OFFICE: Montreal.





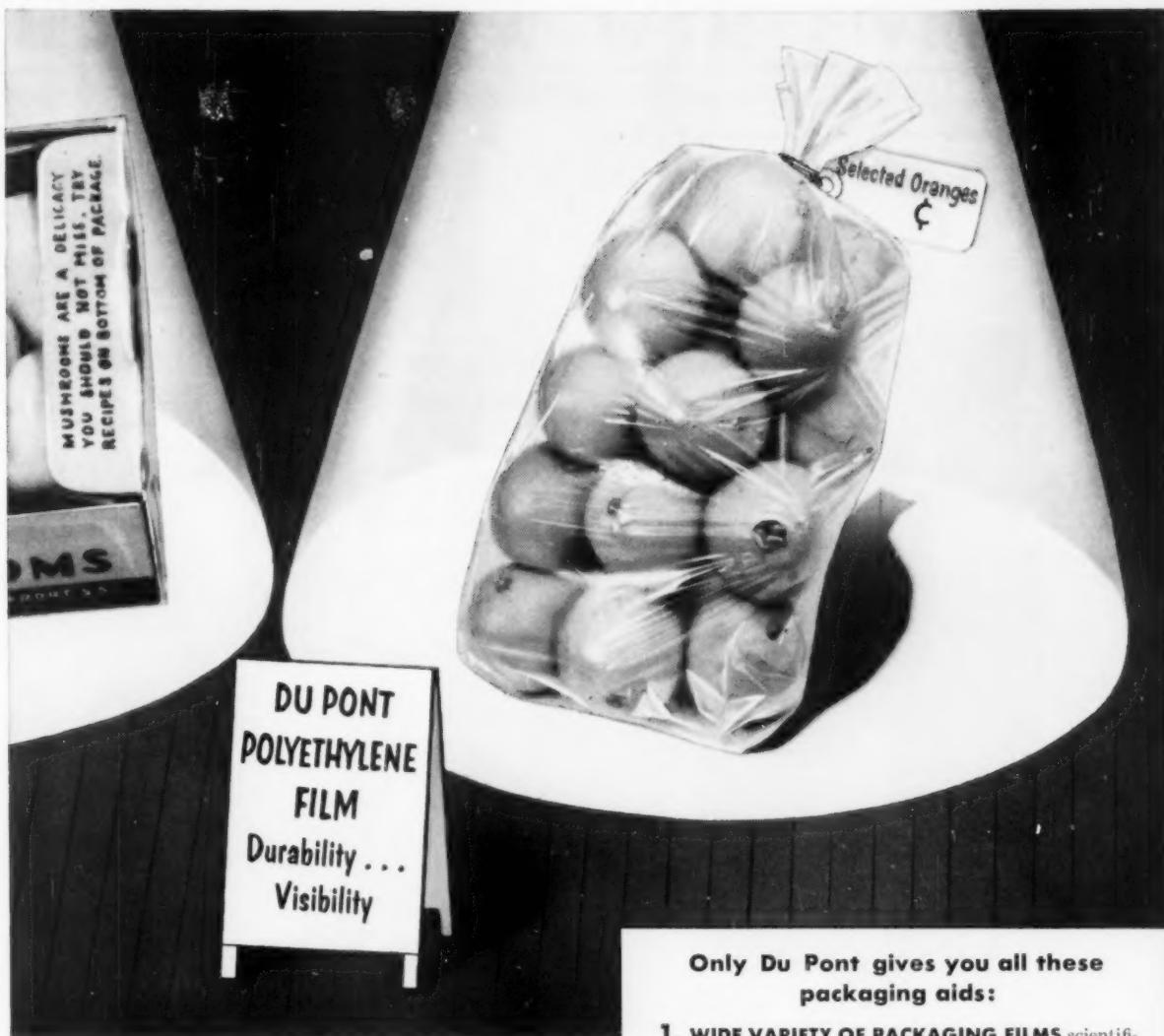
Du Pont's Complete Packaging Service Product In the

NO MATTER what food product you're packaging, you want the package to highlight your product . . . to present it . . . clearly visible . . . attractive and taste-tempting. In addition to these selling features, you want the package to give your product the kind of protection it needs.

To help you get the right package, Du Pont offers over 100 varieties of three basic films—Cellophane, Polyethylene and Acetate. Du Pont's packaging specialists, with over 25 years of experience packaging thousands of different

products, will help you select the best film for your product. If you need freshness protection Du Pont moistureproof Cellophane will give it. If you need a film that's extra-tough, flexible even at low temperatures or in contact with ice, Du Pont Polyethylene Film is the answer. For eye-catching luster, Du Pont Acetate Film is ideal as a tray overwrap.

And you can turn to Du Pont for help with questions of package construction . . . the most efficient and economical use of film. What's



Can Help Put Your Spotlight

more, Du Pont's continuing studies of buying habits are available to keep you up to date on consumer reactions in your field.

Get in touch with your Du Pont representative. For information on bags and printed materials, contact a converter of Du Pont packaging films. He'll work with you to insure the package performance your product deserves. For further information, write to: E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Delaware.

**Only Du Pont gives you all these
packaging aids:**

1. **WIDE VARIETY OF PACKAGING FILMS** scientifically tailored to meet the needs of varied products and packages.
2. **TECHNICAL** assistance to help you plan the most practical and efficient construction of your package.
3. **MERCHANDISING** help through continuing nationwide surveys and buying habits, to keep your package up to date.
4. **NATIONAL ADVERTISING** to continually strengthen consumer preference for your packaged products.

DU PONT PACKAGING FILMS

CELOPHANE • POLYETHYLENE
ACETATE

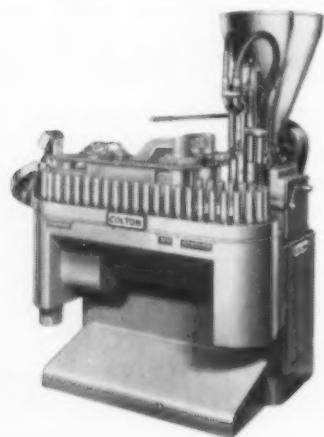
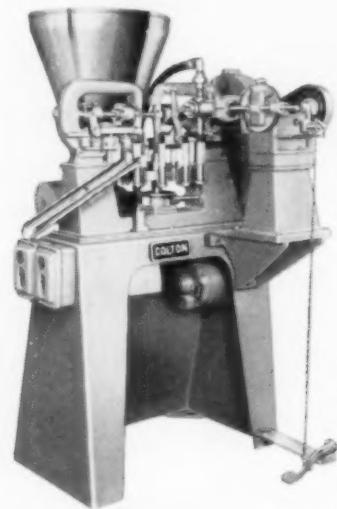


Better Things for Better Living . . . through Chemistry

WHAT'S NEW WITH COLTON?



... THERE'S THE 124, 126, 128 and 132 (left) MULTIPLE LIQUID FILLER with ROTARY INDEXING TABLE; runs all sizes containers up to 4 fl. oz.; round, oval, rectangular, plastic or glass. Adapts to any standard conveyor belt. Fully automatic. Single rev. clutch for no-container-no-fill: no overfill, no waste, no drip. Quick, easy cleaning. Four to twelve nozzles; 32 to 480 fills per minute.



... THERE'S THE 180 (above) AUTOMATIC TUBE FILLER, CLOSER AND SEALER with the new HEAT SEALING HEAD which means that this famous high-production, high versatility machine now handles both collapsible metal and plastic tubes. Single, 55 tubes, Twin, 100 tubes a minute. Many accessories available.

Write for complete details on these new Colton machines. Find out why "THE NEW INSTALLATIONS are COLTON".

... THERE'S THE 113 (above) COMBINATION LIQUID and PASTE FILLER, CLOSER and CRIMPER with EJECTOR; the first FINE QUALITY, LOW-PRICED machine with extreme versatility in filling liquids, creams, pastes. Traditional Colton accuracy of fill and dependability of operation. Fills liquids automatically at 40 tubes and pastes semi-automatically at 20-30 tubes a minute. Furnished with angle nozzle for filling heavy creams and pastes without trapping air.

ARTHUR COLTON COMPANY

DIVISION SNYDER TOOL & ENGINEERING COMPANY
3497 E. LAFAYETTE • DETROIT 7, MICHIGAN

PLANT NO. 2—500 BELLEVUE, DETROIT • PLANT NO. 3—MANCELONA, MICHIGAN
Sales and Service Engineers Coast-to-Coast
Export Office—13 E. 40th St., New York City
Offices in Principal Cities Throughout the World
Specialists in Pharmaceutical and Packaging Machinery for Nearly 70 Years



TABLET COUNTERS



COATING STANDS



GRANULATORS



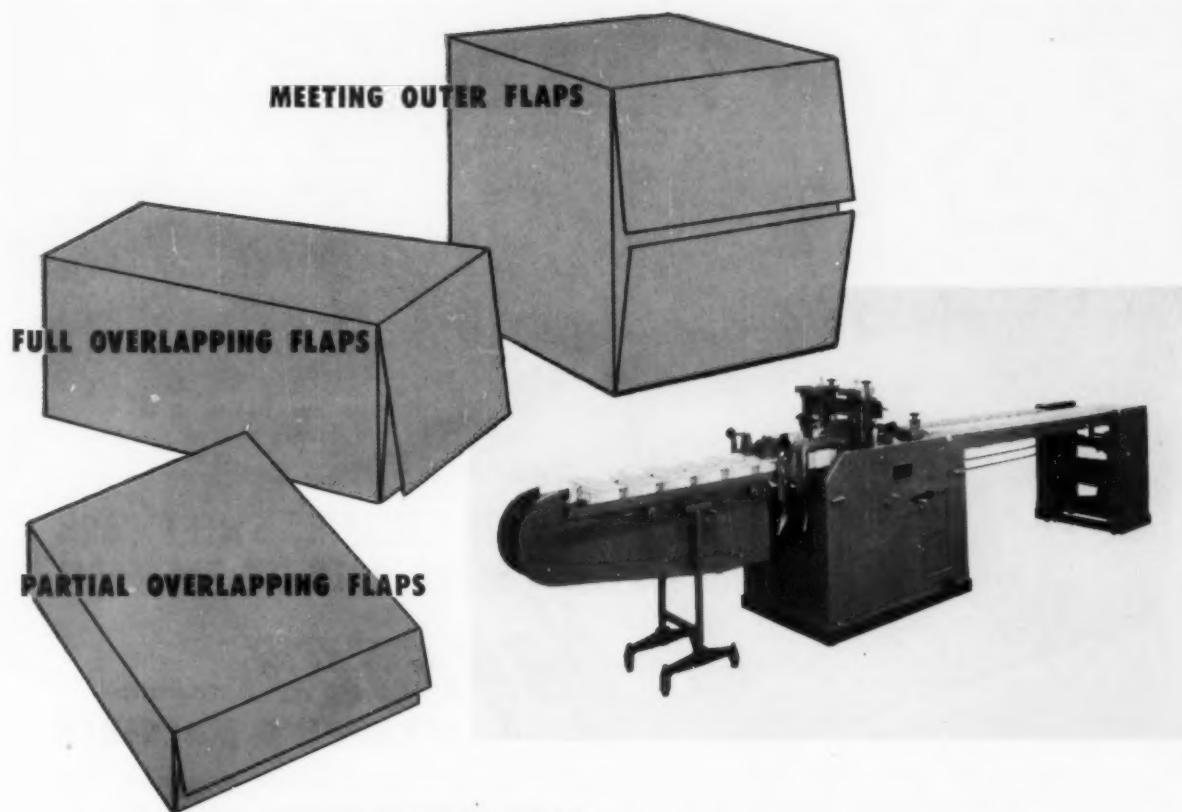
MIXERS



OVENS



TABLET PRESSES



NEW CECO[®] CARTON SEALER
GLUES AND SEALS ALL 3 CARTON TYPES
WITH POSITIVE INNER SEAL

Neater, cleaner sealing! Versatility for handling any type carton in a wide range of sizes and shapes! The new semi-automatic Model 3901B gives you these important features plus increased production capacity . . . as much as 100% more.

In addition to production economies, Model 3901B cuts your material costs by permitting use of lower cost cartons without sacrificing strength or quality.

The secret is the vertical glue wheels which apply glue in any desired pattern to any or all flaps. The uniform application of glue assures a neater, cleaner seal, using less glue, and providing simpler maintenance and clean-up of both glue rollers and scrapers.

To change from one type, size or shape carton to another takes only 3 minutes and can be done by any unskilled operator. Variable speed controls adjust Model 3901B to your production requirements.

Send for full details and brochure on Model 3901B today.

The new vertical gluing method is also available on CECO Models 40 and 45 Cartoners. All CECO Glue Sealers and Cartoners are self-contained units, mounted on casters for easy portability.

CONTAINER EQUIPMENT CORPORATION

MEMBER, PACKAGING MACHINERY
MANUFACTURERS INSTITUTE

78-88 LOCUST AVENUE, BLOOMFIELD 3, N. J.

PHILADELPHIA • BOSTON • CHICAGO • DALLAS • JACKSON
NEW YORK • SAN FRANCISCO • SAVANNAH • TORONTO



FAMOUS "RUSKIN" SWEET CORN
IS PREPACKAGED AT THE FARM
with
Hayssen Automatic
WRAPPING MACHINES

At Ruskin, in Florida's "Salad Bowl," Paul B. Dickman has developed the biggest prepackaging operation of its kind in the world. In about 30 minutes from the stalk, milky-fresh corn and a dozen other vegetables are "flavor-sealed" in cellophane on Hayssen Wrapping Machines. The packages are shipped under refrigeration by rail,

truck and plane to over 80 cities . . . as far north as Minneapolis, as far west as St. Louis. Only the edible parts of the vegetables are packaged . . . saving transportation costs, handling, packaging and icing costs. Wastes are fed to cattle. From the original 15 acres planted to tomatoes, Dickman farms now occupy thousands of acres.

A MACHINE TO WRAP ALMOST ANY SHAPE OR SIZE
Fresh Fruits and Vegetables

The Hayssen Automatic Wrapping Machine costs much less than you'd think and occupies about half the usual floor space. Wraps up to 2700 packages per hour with one operator. Can be built

in with your packing and sorting conveyors. Handles heat-sealing cellophane, acetate, pliofilm and other materials. Many Hayssen units are in use today that were purchased over 20 years ago.

WRITE for Bulletin on Hayssen Wrapping Machines for Fruits and Vegetables. Tell us your wrapping problems . . . we have the answer.

IT PAYS TO WRAP THE HAYSEN WAY
Hayssen MFG. COMPANY
Dept. MP-9, SHEBOYGAN, WISCONSIN

Since 1910, One of the World's Largest Manufacturers of Wrapping Machines



BAKED GOODS



TEXTILES



VEGETABLES



FROZEN FOODS



ODD SHAPES



CAHDY



ICE CREAM



DAIRY



MEATS



PAPER

Plastic containers sell 100 salads an hour!

**Supermarket reports record turnover
... minimum returns ... with salads
packed in PCC CONTAINERS**

Two hours after the first Jessica's Salads were displayed in PCC's crystal styrene containers, the entire stock of 200 sold out! . . . reports the manager of a famous Indianapolis supermarket. Also, where salad returns used to run 15% and higher . . . now, due to the longer shelf-life and increased turnover of plastic-packed products, they are down to 2%!

"The public loves plastics! We hear it all the time," say David and Jessica Bernstein, Indianapolis's largest processors of salads. "The eye-catching visibility of plastic-packed salads provides the *extra* customer appeal that adds impetus to impulse buying!"



**PLASTIC CONTAINER CORPORATION
West Warren, Massachusetts**

Plastic containers sell 100 salads an hour!

**Supermarket reports record turnover
... minimum returns ... with salads
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**DOZENS OF NEW
CONTAINERS
CREATE VOLUME
IMPULSE SALES**

STYRENE CLEAR PAK

Sparkling containers, light as a feather, display products in their "best light." There are hundreds of uses for every size — each with a hundred re-uses!

No. 1370—16oz. No. 1374—20oz.
No. 1372—8oz. No. 1375—12oz.
No. 1373—4oz. No. 1377—1oz.

Colors: Crystal, transparent cranberry, yellowglo, greenglo, pinkglo, fireglo, with clear styrene covers.

ETHYLENE KOLD PAK

A perfect tie-in promotion item. Fits any type of refrigerator freezing unit, complete with double-seal, tabbed cover; ideal for home freezing.

No. 1253—16oz. No. 1255—32oz.

Colors: Translucent red, yellow, crystal, clear styrene with covers.

ETHYLENE CE



STYRENE JELLED SALAD MOLD

Customers have a phrase for it: mouth-watering! Jellied fruits, poultry, meats will take on new visible flavor when packed in these fancy PCC molds.

No. 1271—6oz. No. 1272—8oz.
No. 1273—12oz. No. 1274—14oz.
No. 1276—24oz.

Colors: transparent cranberry, yellow, green, crystal — opaque white covers.

DECORATOR PLASTIC

LAZY SUSAN

How's this for a premium series: a handsome 9 pc. Lazy Susan with 7 Party Packs in 7 different colors . . . plus the revolving Lazy Susan tray with its smart reversible base!

Colors: 7 Party Packs, red, coral, yellow, chartreuse, green, turquoise, gray.
Covers for Party Packs: crystal.

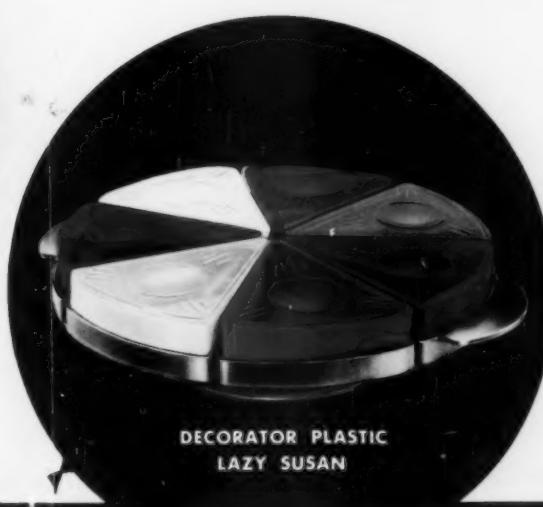
Tray and Base: black.

ETHYLENE CEREAL BOWL

Used as a premium pack, this' novel, colorful bowl has the good design and durability homemakers love!

No. 1263—18oz.

Colors: Opaque red, yellow, white, baby blue, baby pink, with clear styrene covers.





HUNDREDS OF SIZES, SHAPES, COLORS...

AVAILABLE NOW FOR IMMEDIATE DELIVERY

You name it. We'll pack it to its best advantage! Whatever your product . . . however large or small . . . it's *better* packaged in PCC Containers.

Customers see what they want to buy. And they see it first and foremost. (Just compare the display qualities of PCC to traditional containers!) They buy it . . . they take it home . . . and there your sales messages stay — imprinted for you on the lid or container. Folks find thousands of reasons to keep colorful, durable PCC Containers in constant use.

Contact PCC today. Let us show you how we can increase the sale of your products at surprisingly low costs. Write on your letterhead for information.

AUTOMATICALLY PACKED

PCC Containers can be packed with standard mechanized packaging equipment.

LIGHT

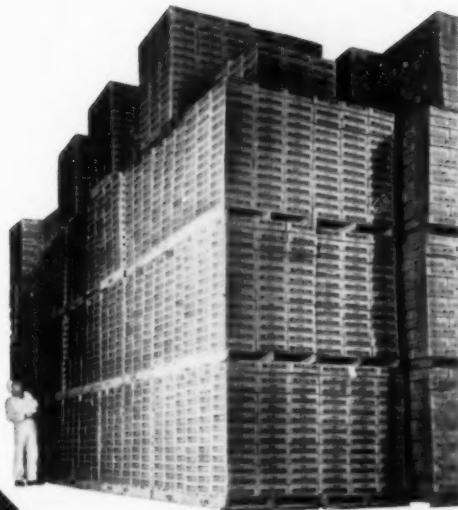
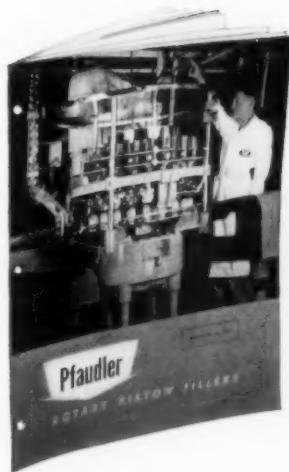
Light in weight. Cheaper to ship. Easier to handle.

DURABLE

Breakage loss is cut to a minimum with plastic containers.

SPACE-SAVING

Containers are shipped nested—save you valuable space.



This new booklet

... can show you how to do this ▶

... and answer these questions:

Exactly how does a rotary piston filler operate?

- Diagrams and explanation show you how!

How can I lower the cost of cleaning food fillers?

- Booklet shows you how 1 man, using no tools, can do the job in less than $\frac{1}{2}$ hour!

Can you guarantee the speed of filling my products?

- Typical chart gives examples of guaranteed filling speeds!

What fillers are available, and what jobs are they designed for?

- Six well-organized pages on filler operation and accessories give you all the answers!

if you mail this coupon... today!



THE PFAUDLER CO., Dept. MP-9, Rochester 3, N.Y.

Please rush me a copy of your new rotary piston filler booklet No. 911.

I am working on a problem in filling.
 I want to bring my literature library up to date.

Name _____

Title _____

Company _____

Address _____

City _____ Zone _____ State _____

Pfaudler

THE PFAUDLER CO., ROCHESTER 3, NEW YORK

Engineers and Fabricators of Food Processing Equipment

Gravity Fillers
Piston Fillers

Steam Peelers
Deaerators

Vacuum Pans
Evaporators

Sales Appeal

Packages using printed cellophane or acetate and wrapped on Scandia machines which give better production and more economy.

Keep prices down and volume of profits up by the use of Scandia automatic wrapping machines.

Call SCANDIA for high-speed wrapping with:
Electric Eye (two-way registration)
Easy-opening Tape (Extended pull-tab)
Automatic Intake
Variable Speed Drive
All Rotary Motion



MACHINES
AVAILABLE
ON
RENTAL
BASIS
FOR
MARKET TESTING
NEW PRODUCTS
AND PACKAGES



SCANDIA

Manufacturers of Better Packaging Machinery

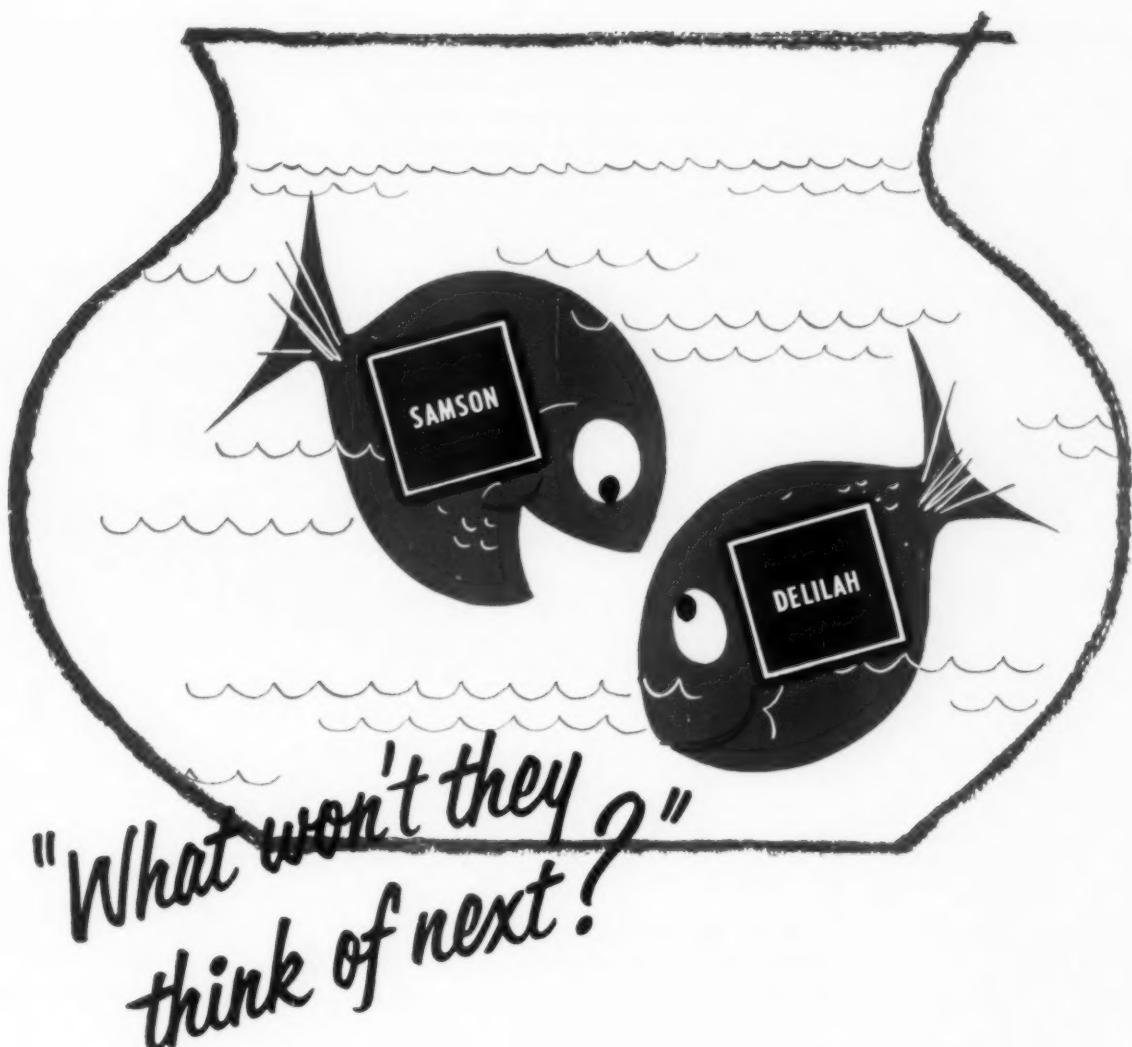
500 BELLEVILLE TURNPIKE • NORTH ARLINGTON, N. J.

330 SOUTH WELLS ST., CHICAGO 6, ILL.

282 SEVENTH AVE., SAN FRANCISCO, CALIF.

6181 YORK BLVD., LOS ANGELES, CALIF.

BUNDLING • BANDING • MULTIPLE WRAPPING • STAMPING • HIGH SPEED WRAPPING
MANUFACTURED UNDER IRONANGER PATENTS



Improbable? Perhaps—but not much more difficult than many of *your own* everyday labeling problems! And you can solve them easier, faster, more economically with Kleen-Stik Pressure-Sensitive Labels.

Versatile Kleen-Stik Labels need no wetting . . . no heating . . . no wiping . . . Simply *press in place* on any smooth, clean surface. Kleen-Stik sticks *tight*—even follows curves and angles, yet peels off clean and easy when desired.

Test Kleen-Stik Labels Yourself! Write today for free samples that you can try on your own product or package.

**Use Kleen-Stik Pressure-Sensitive Labels
for Every Application:**

- Brand Identification • Prices • Instructions • Seals • Trade Marks • Inspection • Guarantees • Operation Diagrams • Other Volume Labeling

KLEEN-STIK PRESSURE SENSITIVE LABELS ARE AVAILABLE
THROUGH YOUR REGULAR ROLL LABEL PRINTER

"Stuck" on a Special Labeling Problem?

Let our expert technical staff help you. Their recommendations are yours without obligation.



KLEEN-STIK LABEL DISPENSERS can help cut your labeling costs in half! Ask your printer or write us for full information.





Breeze Mobile . . . suspended from ceiling, is always gently moving, animated by normal air currents . . . focuses attention on product, package and premium offer . . .



Squirt Bulletin . . . serves the store by providing display space for current advertising, and is a standing advertisement for Squirt . . .



Ralston Shaker . . . is unique, effective display . . . A flexible wire, clamped to shelf edge, holds lithographed silhouettes that quiver slightly from airflow and floor vibrations . . . Sells milk and fruit as well as Chex cereals . . .



Miller Twin Bin . . . makes an island display out of two store carts . . . stimulates sales of appetizers and snacks as well as Miller High Life



In the supermarket and shopping center . . . the windows serve to display the store instead of the goods. Store traffic tests higher than street traffic. The shopper inside, subject to suggestion and impulse, is a better prospect than the looker outside.

In-store display can be highly resultful . . . but is harder to get, intensely competitive, subject to store procedures and traffic flow. Store managements rigorously screen manufacturers' displays, insist on effective effort . . . Inside display today is an important investment for any maker of consumer goods.

This new merchandising strategy is no mystery to Einson-Freeman. E-F displays are basic ideas adapted to self-service techniques, afford new opportunities to the display advertiser and the store, to sell more goods. Some recent instances are shown on these pages.

For better reception by stores, better values in your display, phone, wire or write . . .

Einson-Freeman Co., Inc.

Originators of displays that sell anywhere

Starr & Borden Avenues, Long Island City, New York



Pillsbury Panels . . . are altruistic advertisements that do not even carry Pillsbury's name. Superb reproductions of colorful food ensembles, they have strong appetite appeal, suggest other items to housewives, swell the unit sale . . .



For better printing results... better press performance—



BBD
quality-controlled
**FLEXOGRAPHIC
INKS**



You get more out of BBD FLEXOGRAPHIC INKS—more printability, more color-strength, more mileage, more productive press-time — because BBD puts more into them. For instance: from start to finish every step in the manufacture of BBD INKS is carefully checked and quality-controlled by technicians who are flexographic ink specialists. Quality-control at BBD begins with selection of the proper raw materials... continues through extensive laboratory formulations... and ends only when the finished ink matches our original standard in every respect. A costly extra ingredient you never see, this quality-control procedure is one of the important reasons why you get the best results from BBD INKS.

More information about BBD quality-controlled INKS for flexographic printing on film, foil or paper—together with printed samples—may be obtained by contacting your nearest BBD office or writing direct to Bensing Bros. & Deeney, 3301 Hunting Park Ave., Philadelphia 29, Pa.



Bensing Bros. and Deeney

SALES COMPANY

Flexographic Ink Specialists

PHILADELPHIA • CHICAGO • LOS ANGELES
CAMBRIDGE, MASS. • MONROE, LA.

Export: MC LAURIN-JONES CO., New York
Canada: MANTON BROS., Toronto

NOBODY HAS AS MUCH EXPERIENCE AT MOLDING POLYETHYLENE AS

TUPPER!

The logical molder for you to consult regarding that product or package of yours which is to be made of polyethylene is Tupper. Tupper has done more than any other molder to make molded polyethylene a practical reality.

Aside from having designed, patented, and promoted successful seals, closures, and dispensers for polyethylene containers, the Tupper Corporation has vast experience in *every phase* of polyethylene packaging and polyethylene injection molding. This experience will be of major importance in improving your product, in reducing your costs, when Tupper goes to work for you.

Tupper's combination of experience, technical ingenuity, and the most modern equipment is at your service for the custom molding of your product in polyethylene. You can do no better than the best ... and the best at molding polyethylene is Tupper!

TUPPER!
TRADE MARK

TUPPER CORPORATION

Manufacturers of — CONSUMER, INDUSTRIAL,
PACKAGING AND SCIENTIFIC PRODUCTS

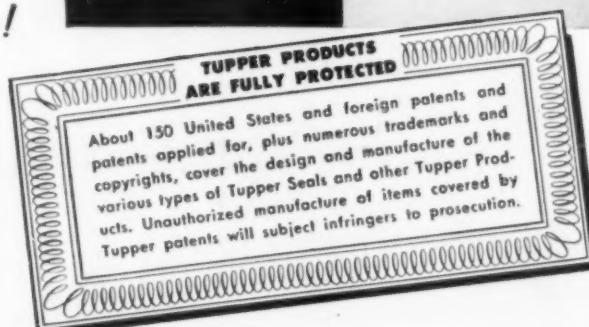
Factories, Laboratories and Sales Offices:
Farnumsville, Mass., Blackstone, Mass.
Orlando, Fla., Montreal, P.Q.
Showrooms: 225 Fifth Ave., N. Y. C.

Address all communications to: Dept. MP-9



Tupper Seals are air and liquid-tight flexible covers. The famous Pour All and Pour Top covers are designed for easy dispensing. They are made in sizes to fit all Tupperware containers.

When equipped with Tupper Seals, Tupper Canisters, Sauce Dishes, Wonder Bowls, Cereal Bowls and Funnels in various sizes are the most versatile reusable containers you have ever seen.



the ABC's of bigger sales



WITH SELF-SELLING **Milprint** PACKAGES!

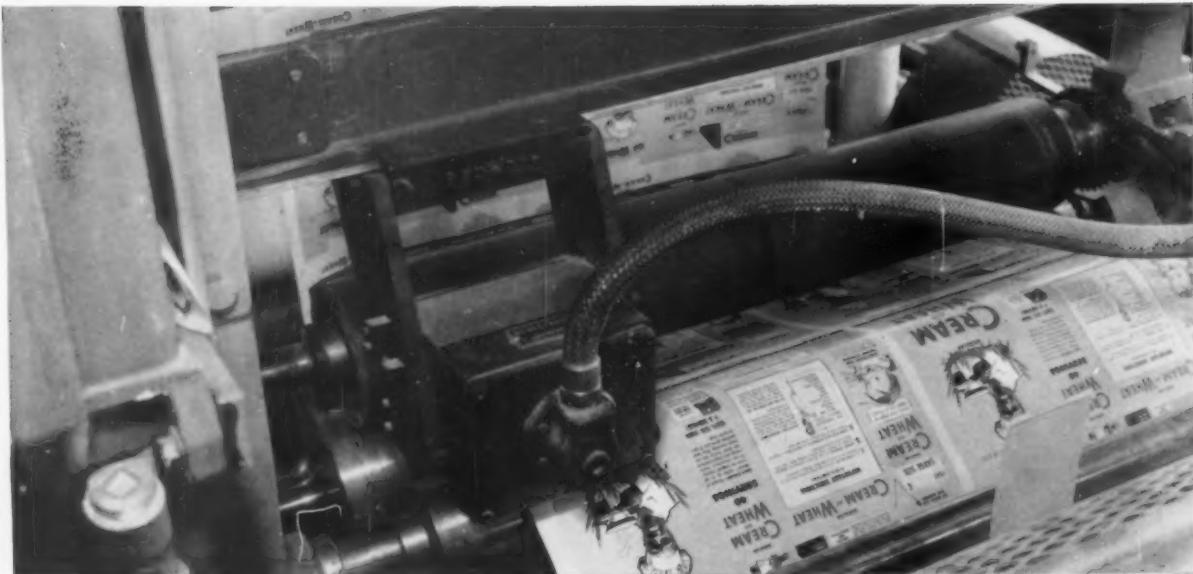
On bakery shelves where competition is keenest, that's where you'll find Milprint packages doing an outstanding selling job! And the reason is simple, for Milprint packages have the extra zip, brilliance and sparkle that attract more customers. And, of course, Milprint packages offer the superior product protection that means satisfied customers—who'll look for your brand next time they shop!

For the widest variety of packaging materials and printing processes available anywhere, always remember to call your Milprint man—first!

General Offices, Milwaukee, Wisconsin
Sales Offices in Principal Cities

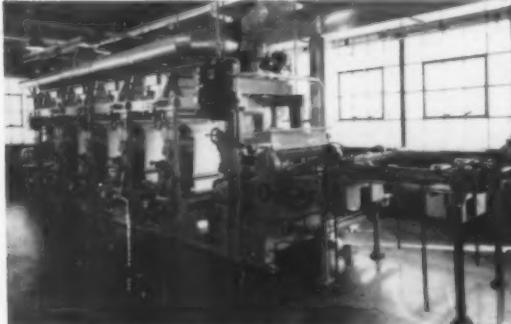
This insert printed by Milprint, Inc.

Milprint INC.
PACKAGING MATERIALS
LITHOGRAPHY & PRINTING



Maintains Color Register Automatically at all operating speeds. PROVEN ON

MULTI-COLOR PRINTING OF THIN AND HEAVY PAPERS,
FOILS, CELLOPHANE AND OTHER PACKAGING MATERIALS.



This is a Klingrose Press equipped with a Hureltron Automatic Circumferential Register Control. Note the control panel at the delivery end of the press.

HURELTRON

AUTOMATIC CIRCUMFERENTIAL
REGISTER CONTROL

ELECTRIC EYE EQUIPMENT COMPANY

1934 EAST FAIRCHILD STREET • DANVILLE, ILLINOIS

Manufacturers of Hureltron Automatic Controls of Caliper and Weight on Paper and Board; Center Line and Side Web Guide Controls; Cut-Off and Back-Up Controls; Slitter Controls; Continuous Nephelometer for detecting suspended solids in liquids.

Here's the practical . . . and profitable . . . method of insuring top quality color register . . . hour after hour . . . day and night. It's automatic. It's accurate. It's speedy. It's dependable. Old time hazards, delays, costs and uncertainties due to the human element have been reduced or eliminated. Fast or slow . . . two colors or ten . . . color register is maintained throughout the run to an amazingly high degree of perfection.

Here are a few of the advantages this equipment provides:

1. Maintains accurate, automatic register of all colors within a few thousandths of an inch.
2. Controls register established at low speeds up to highest operating speed.
3. Makes high speed corrections at splices, thus reducing off register waste.
4. Provides pressman with continuous indication of running register and enables him to make adjustments in register in known increments.
5. Frees pressmen from register worries permitting closer attention to other operating problems.

Hureltron Automatic Circumferential Register Controls are in operation in the finest color printing plants in the country, both roto and letterpress. They are adaptable to any web-fed press . . . require a minimum of manpower to operate . . . greatly reduce waste . . . and insure finest quality printing.

Want more details? Write us today. There's no obligation.

Formula for an eye-stopping package...

take a jewel-bright bottle

(uncluttered by a label)

top it with

BEETLE®
plastic

(product name molded in)



This *Noa Noa* closure provides a good tight seal to the small bottle-opening . . . yet has over-all dimensions as wide as the bottle shoulders to give a feeling of massive richness. Note, too, the clean depth of its inside surfaces. Closures molded by Norton Laboratories, Inc., Lockport, N. Y.

It's a stopper of a top on Helena Rubinstein's new *Noa Noa* bottle . . . with its bold, beautiful "etching" of the product name doing all the labeling necessary.

The top that looks like bamboo is made of BEETLE thermosetting plastic — sturdy BEETLE that molds to any shape you desire . . . colorful BEETLE that's available in any shade you specify . . . durable BEETLE that will function smoothly in use, resist the wear-and-tear of daily use as well as the chemical action of the contents.

Yet, for all their practical advantages, luxurious appearance and "feel," BEETLE urea plastic tops fit average packaging budgets. BEETLE is the plastic to think of whenever you want reasonable costs to *look like a million!*

AMERICAN Cyanamid COMPANY

PLASTICS AND RESINS DIVISION
32C Rockefeller Plaza, New York 20, N. Y.

In Canada: North American Cyanamid Limited, Toronto & Montreal

Introducing the New
POTDEVIN S.O.S. Bag Machine

for High-Speed
 Production of

SUPER MARKET CARRIER BAGS

Here is the latest development in paper bag machinery for mass production of the new super market self-opening-square carrier bag. It is entirely automatic, producing finished bags direct from rolls of paper at the highest rates of speed for this style of bag.

Multi-colored bags produced in one operation with a Potdevin Flexographic Press combined with bag machine.

The POTDEVIN Model 84RKW produces bags within the following range:

Minimum Tube Length	15"
Maximum Tube Length	28"
Minimum Bottom Width	3 1/4"
Maximum Bottom Width	6 1/2"
Minimum Bag Width	7 1/8"
Maximum Bag Width	12"
Minimum Paper Width	21"
Maximum Paper Width	38"

Side seam arrangement permits location of the seam anywhere between edge and center of tube.

The standard machine is supplied with the following:

- * Parts for making one size of Super Market Bag.
- * Motor and Reeves power unit.
- * Side-seam arrangement.

- Carrier, presser and delivery portion.
- Guards and wrenches.
- Rotary cut-off.

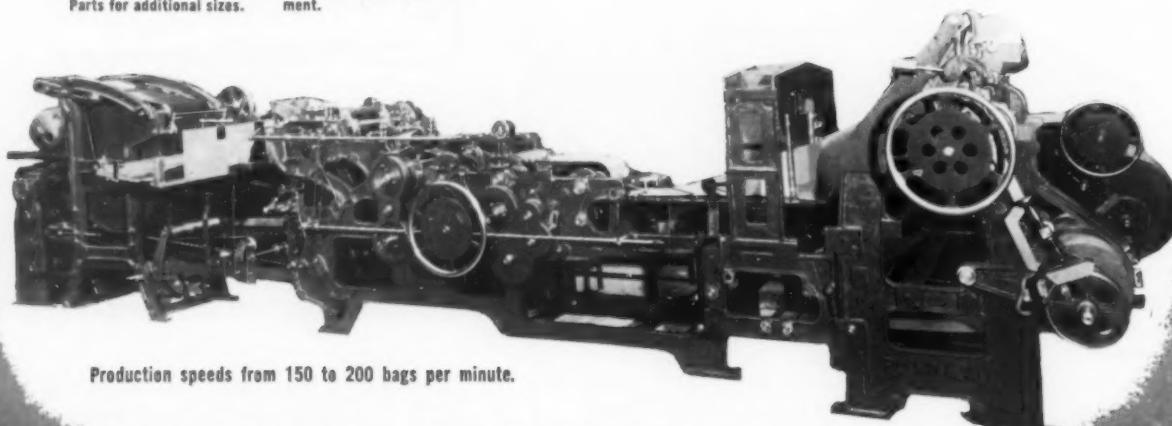
Additional equipment available:

- Bag machine portion of aniline press chain drive.
- Tachometer—indicates productive speed of machine.
- Parts for additional sizes.
- Lining attachment.
- Hole punching and scoring device.
- Trademark printing attachment.



Write for complete information and demonstration arrangements.

POTDEVIN MACHINE CO.
 284 North Street Teterboro, N. J.



Production speeds from 150 to 200 bags per minute.

**There's Selling Power in
Window Boxes Especially Those
With Sparkling Acetate Windows**



For product appearance and protection . . .
for display possibilities and real selling power the
box with a sparkling acetate window is king
of packaging methods.

When you plan on the window box to help sell
your product, specify Celanese* Acetate Film
windows—for clarity, flatness, cockle-resistance
and long shelf life. Celanese Corporation of America,
Plastics Division, Dept. 108-1, 290 Ferry Street,
Newark 5, N. J. Canadian affiliate, Canadian
Chemical Company, Ltd., Montreal and Toronto.

Celanese*
PACKAGING
FILMS

*Reg. U. S. Pat. Off.



The Famous Brands Shine More Brightly in
Wheeling Tubes

W H E E L I N G

WHEELING

S T A M P I N G C O.

WEST VIRGINIA



Aluminum, Tin and Lead Collapsible Tubes—Tube and Bottle Caps—Plastic Specialties

Sales Offices: New York - Chicago - Cleveland - St. Paul - Wilmington - Cincinnati - Los Angeles - St. Louis

Today's goods must

SELL ON SIGHT



Don't hide your product, show it in CELLOPHANE*

BRITISH CELLOPHANE LIMITED

Sales Offices: 12/13 CONDUIT STREET, LONDON, W.I. ENGLAND
Reg. Offices and Factory: BATH ROAD, BRIDGWATER, SOMERSET

* CELLOPHANE is the registered trade mark of British Cellophane Limited, in the following countries: Great Britain, Australia, Ceylon, Cyprus, Denmark, Eire, Gibraltar, Hong Kong, Iceland, India, Jamaica, New Zealand, Pakistan, Northern Rhodesia, Southern Rhodesia, Trinidad and Tobago, and the Union of South Africa.



there are 3 dimensions to
NIBROC[®] WHITE-

First: It handles and prints better on your presses and helps *you* sell more bags.

Second: Your customer can more readily sell the merchant his coffee, flour, rice, meal, dog-food in an extra-strong bag printed on high-brightness NIBROC WHITE.

Third: The product in a NIBROC WHITE bag is the one that will catch the eye of the housewife in the modern supermarket—and its strength will carry it home safely!

Use NIBROC WHITE and pass on some of these advantages to *your* customer—and on to *his* customer as well. Write to our Technical Service Division, Dept. DR-9, Boston.



COMPANY, Berlin, New Hampshire
CORPORATION, La Tuque, Quebec

General Sales Offices: 150 Causeway Street, Boston 14, Mass.
Dominion Square Building, Montreal, Quebec

SOLKA AND CELLATE PULPS • SOLKA-FLOC • NIBROC PAPERS • NIBROC TOWELS
NIBROC KWTOWLS • NIBROC TOILET TISSUE • BERMICO SEWER PIPE AND CONDUIT
ONCO INSOLES • CHEMICALS

packages

for make-up

all made up to sell!

In a way the Ritchie designers who created these smart, new cosmetic packages are a lot like make-up artists. They shape, they color, they construct and they dramatize a package —until it's perfectly made up for the part it's to play in a merchandising program. Lady Esther required just such thinking and skill in the creation of the packages you see here. Give



Ritchie a try at your next packaging problem.

Ritchie

W. C. Ritchie and Company

8842 Baltimore Avenue • Chicago 17, Illinois • New York
Detroit • Dallas • St. Louis • Cincinnati • Memphis
Rochester • Cleveland • Jacksonville • Los Angeles • Denver

Lady Esther
Puff Magic

RECEIVED
U.S. POSTAL SERVICE

Announcing
 two new sizes in the
Stoway line for
 food packagers....

**8 and 12 oz. PLASTIC
 CONTAINERS**

with

snap-on, air-tight
 lids and all the sales-
 building advantages of
 the recently introduced
 16 oz. container...

- ★ maximum product visibility
- ★ attractive self-selling, useful container
- ★ air-tight pack preserves foods longer
- ★ shatter-proof container with unbreakable lid


 Clear STYRON plastic with snap-on polyethylene lids.
 Stock No. 108:
 Lid dia. 3 3/4"; height
 2 1/4"; base dia. 3 1/4";
 capacity: 8 oz. Approx. shipping weight
 25 lbs.


 Stock No. 112:
 Lid dia. 3 3/4"; height
 3 1/8"; base dia. 3";
 capacity: 12 oz. Approx. shipping weight
 33 lbs.


 Stock No. 116:
 Lid dia. 3 3/4"; height
 4 1/8"; base dia. 2 3/4";
 capacity: 16 oz. Approx. shipping weight
 40 lbs.

All containers packed 500 per carton, nested with dividers. See weights above. Lids packed 1000 to carton; shipping weight: 23 lbs. (One size fits all containers.)



for salads
 cheese spreads
 candy
 sour cream
 ice cream
 sherbet
 cottage cheese
 peanut butter
 frozen foods

**CAN BE USED WITH
 AUTOMATIC
 DISPENSING,
 FILLING AND CAPPING
 EQUIPMENT**

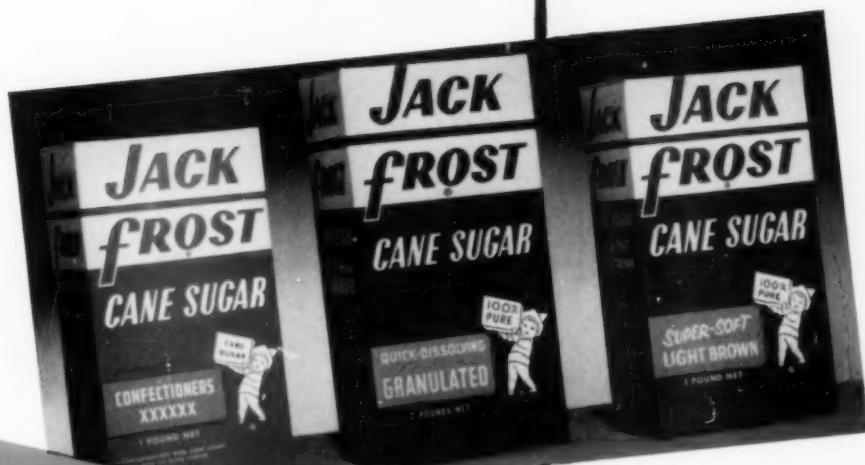
*Has increased sales up to 3 to 1
 over old-style containers!*



SOUTHERN CALIFORNIA PLASTIC COMPANY

1805 FLOWER STREET, GLENDALE, CALIFORNIA

A REAL SWEET PRODUCT-



and a sweet packaging job by PNEUMATIC!

Crystal clear and sparkling sweet — that's the way the Jack Frost Brand always reaches the consumer. Small wonder, because The National Sugar Refining Company of New York planned it that way, starting a number of years ago. An important part of that planning was the purchase of Pneumatic packaging equipment to carry the burden of packaging National's production of GRANULATED, CONFECTIONERS and BROWN Sugars — with economy, neatness and dispatch.

Part of National's Pneumatic equipment is the Double Package Maker — a Pneumatic "original" that produces a package within a package, for double protection. It is a typical example of the way Pneumatic applies its specialized engineering knowledge to develop packaging firsts . . . to provide "lower cost per container" packaging and bottling performance for a wide variety of products.

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Mass. Also: New York; Chicago; San Francisco; Los Angeles; Seattle; Leeds, England. Canadian Div.: Delamere & Williams Co., Ltd., Toronto.

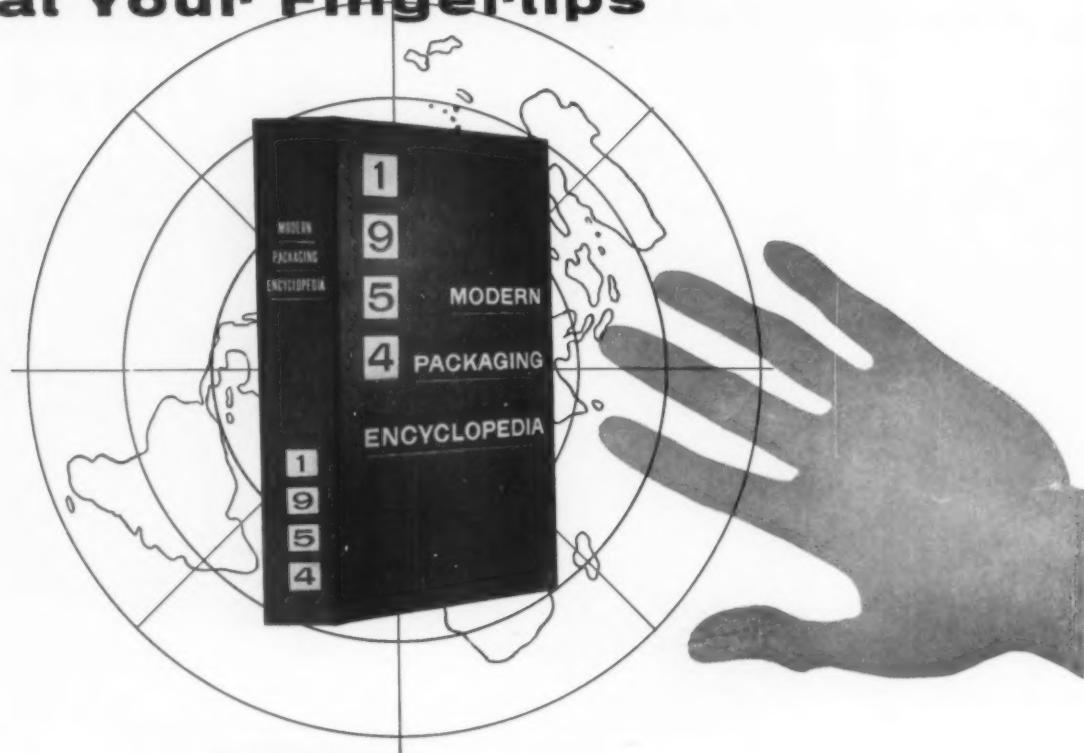
Right: One of several Double Package Maker installations at the Philadelphia plant of The National Sugar Refining Company.



Packaging and Bottling Equipment



The World of Packaging is at Your Fingertips



with the 1954 Modern Packaging Encyclopedia

What are you looking for? Is it a machine? A packaging film? Is it information about establishing package specifications? Or the name of a company which can make custom laminations for you?

In all probability, exactly what you are seeking can be found in your copy of the data-filled MODERN PACKAGING ENCYCLOPEDIA.

The 758 pages of the Encyclopedia are arranged and cross-indexed for easy reference. A large quantity of informative advertising plus an extensive Directory Section of suppliers of materials, equipment and services guide you to qualified sources for all your requirements.

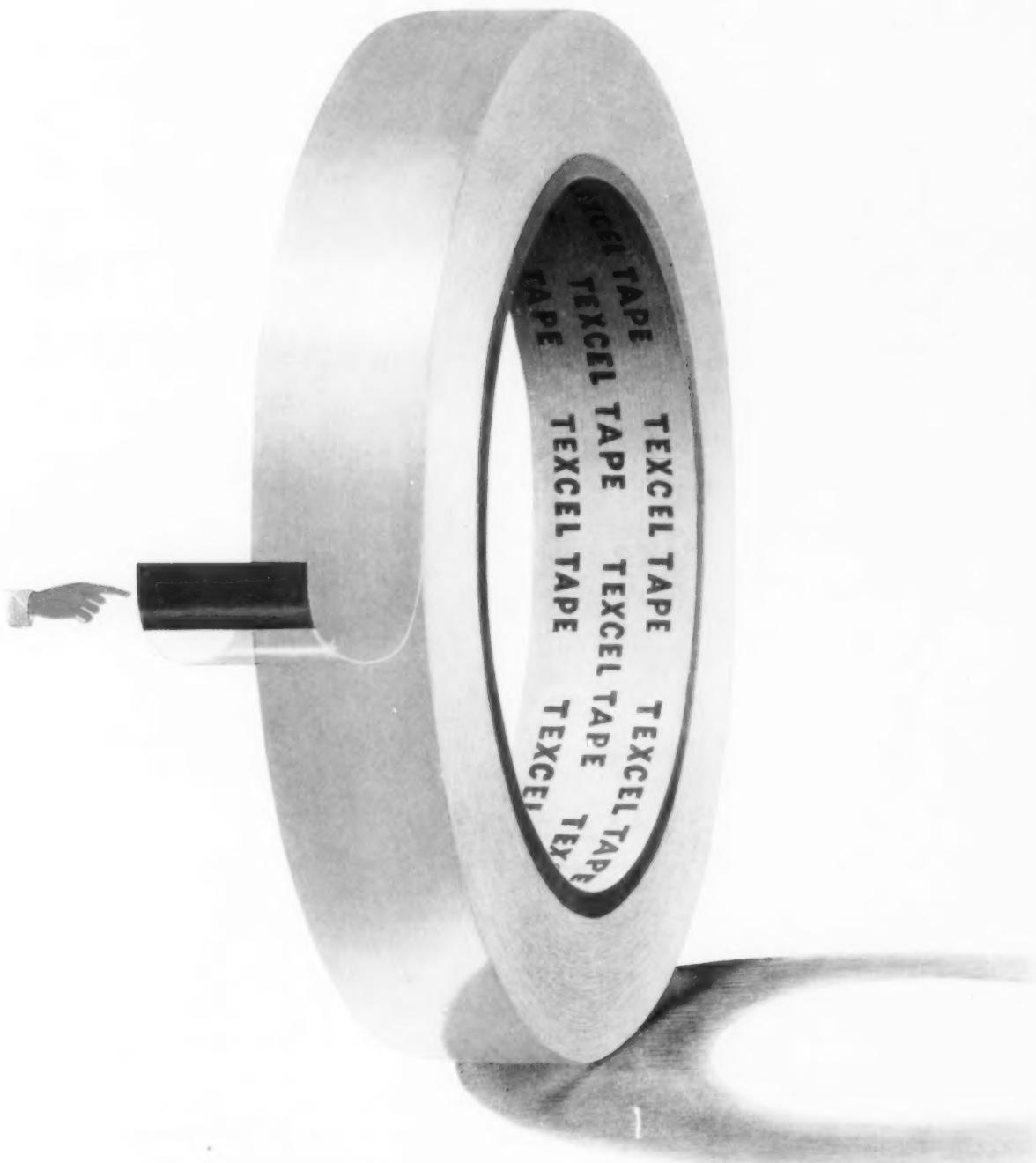
It's handy! It's helpful! It will be to your advantage to get acquainted with the MODERN PACKAGING ENCYCLOPEDIA. Like other users, you will find it to be one of the most useful reference works you own.

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575 Madison Avenue, N. Y. 22, N. Y.

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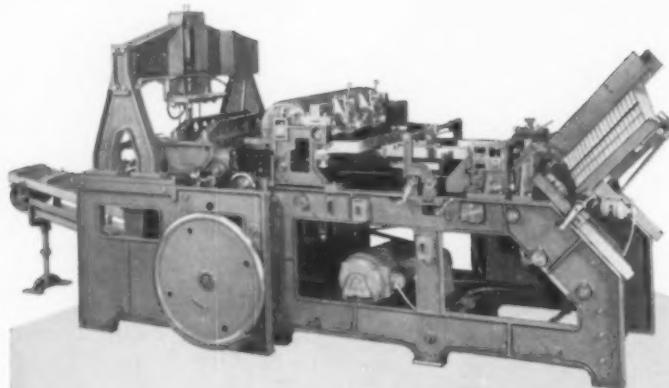


TEXCEL[®]

CELLOPHANE TAPE

PERMACEL TAPE CORPORATION, NEW BRUNSWICK, NEW JERSEY

HIT OF THE YEAR--



**The New Model CM-2 High Speed Brightwood
Produces 120 or more Finished Boxes per Minute**



FIRST INTRODUCED early in 1953, the new CM-2 has more than justified the hopes of the considerable number of companies who already have them. In fact, the many new features, combined with famous Brightwood dependability and high quality production have made the new Model CM-2 High Speed Brightwood the hit of the year for those who are now producing boxes at double the speed of their old machines.

THE NEW CM-2 glues and forms boxes from $2 \times 2 \times \frac{3}{4}$ " deep up to $14 \times 7 \times 3\frac{1}{2}$ " deep. It handles

two-piece boxes and covers, one-piece hinged-cover boxes and trays, for such varied uses as cigarette cartons, cheese boxes, waxpaper roll cartons, tapered trays for meats and display cartons.

BUILT-IN SAFETY FEATURES, new rotary feeders and glue applicators, plus an over-all design that makes change-over even simpler than on the Standard Brightwood, make the new Model CM-2 High Speed Brightwood the bright new star of the packaging industry. Write **US** today for the complete specifications of this great machine.

U. S. AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York • Chicago





... INDUSTRY'S MOST RELIABLE ELECTRONIC COUNTER

Model D144

Double Decitron with 12 place tubes,
counts gross lots as one unit on totalizer.



Model D1

Counts up to 20 units per second.
Other models up to 5000 UPS.



Model P2

Counts in any desired total 1-100.
Other models 1-1,000,000



Model P4W

Desired counts by units 1-10,000
and wired-in warning system.

New, highly perfected Decitron electronic counters cover every counting need . . . from pills to case lots — in any quantity — at amazing speeds (up to 6000 units per second.)

Preset counters afford desired total counts i.e. dozens, fiftys, gross lots, etc. Lineal footage counters totalize production of paper, cloth, etc. Warning systems and other circuits can be energized by these counters if desired.

Write today — we want your counting problem.



ELECTRONIC PRODUCTS DIVISION
POST MACHINERY COMPANY
Beverly, Massachusetts



Unretouched photograph, showing mirror-like reflective quality of new No. 90 Ultragloss.

For Carton Glamour
A SPARKLING NEW FINISH
BY THE LEADER IN CUSTOM COATED BOXBOARD



No. 90 ULTRAGLOSS

This is—by far—the brightest, glossiest folding boxboard made! You could compare it to porcelain! Yet No. 90 ULTRAGLOSS prints beautifully, folds and scores easily, glues readily. Laboratory tests show it to be highly resistant to marking and discoloration, to be outstanding in stiffness and density. In short, for manufacturers seeking the very *ultimate* in carton beauty, this is IT!

May we send you samples?

MADE AT RIDGEFIELD, N. J. BY LOWE PAPER COMPANY

Representatives

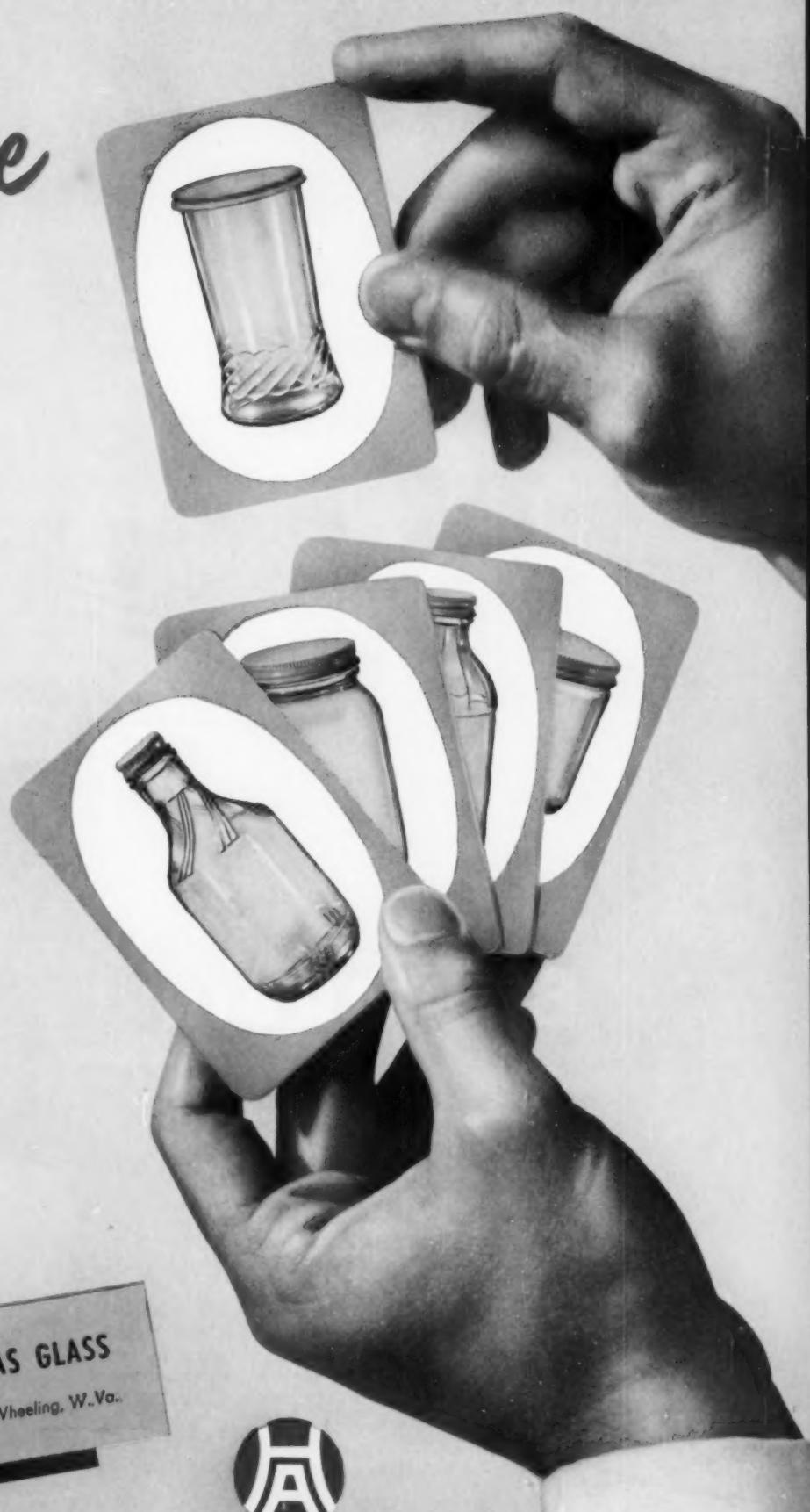
H. B. Royce, Detroit
 Philip Rudolph & Son, Inc., Philadelphia
 A. E. Kellogg, St. Louis
 Norman A. Buist, Los Angeles

Dealer's Choice

The quality of your products is of chief interest to the dealer, but how you package and display them often influences his choice.

H-A Glass packages are planned for easy handling and unusual shelf display . . . efficiency in the store as well as on your production line.

Your good products in Hazel-Atlas glass containers, topped with an H-A selling closure, are always the winning combination.



SCIENCE...GUARDIAN OF QUALITY*

BERNARDIN
Metal Closures

...A never ending effort to safeguard quality through use of modern developments of science.

...A never changing desire to lend industry a helping hand in solving its closure problems.

...Is it strange that a distinguished and growing clientele uses millions of our closures each year?

Bernardin Bottle Cap Company, Evansville, Ind.

*Pictured—Gage Blocks, accurate to a millionth of an inch, supply the basic measuring precision back of Bernardin craftsmanship.

Since 1881—America's First Manufacturer of Metal Closures

STOP PACKAGING WASTE

SAVE MONEY! SAVE TIME! SAVE SALES APPEAL!

with the new, exclusive, tear-resistant

STRONGTOP* BAGS

of CELLOPHANE

*Trade Name

Modern merchandising requires modern packaging and STRONGTOP bags are the first real improvement in soft goods packaging to come along in years. MELROSE STRONGTOPS mean lower costs, easier filling and better merchandise appearance on the store counter or in the display rack.

SAVE MONEY

because STRONGTOP cellophane bags cost less than other packaging materials but have the strength and tear resistance so necessary to modern packaging needs. STRONGTOP'S reinforced tops eliminate the usual 15% to 20% wastage that occurs during the filling of ordinary bags.

SAVE TIME

because STRONGTOP bags are filled faster than bags of old fashioned conventional design. STRONGTOP's reinforced tops permit each operator to fill more bags per hour. Soft goods such as shirts, sweaters, sheets and linens slide right into STRONGTOP bags with less fuss and bother. Your operator does not have to use extreme care to prevent tearing—STRONGTOP makes it unnecessary.

SAVE SALES APPEAL

...because your merchandise will no longer be displayed in torn, unsightly bags. With STRONGTOP bags, it may be removed from its packaging by customer or clerk for inspection and then EASILY slipped back without tearing the bag. Your merchandise stays spotless in transparent bags that do not have that shopworn appearance that discourages customer appeal.

for
SHIRTS
SWEATERS
UNDERWEAR
TOWELS
SHEETS
BLOUSES
LINGERIE
PILLOW CASES
LINENS
CURTAINS
and many more
products



elrose packaging corp.

814 St. Ann's Ave., New York 56, N. Y. • CYPRESS 2-3703

ALL TYPES OF PACKAGING MATERIALS INCLUDING CELL-O-POLY BAGS • GREASEPROOF PAPERS • BARRIER BAGS



How To Improve Your Small Carton Sealing Operations

Send For your FREE copy of our Technical Service Bulletin No. 24 . . . "SMALL CARTON SEALING". This fact-packed Bulletin is filled with valuable current information about "the various kinds of folding cartons" . . . "how to seal cartons properly" . . . "types of carton stock" . . . "factors that influence selection of Adhesives" . . . "carton sealing machines" . . . "influence of contents on choice of Adhesives". It also includes a list of the most popular Carton Sealing Adhesives plus a lot of helpful additional technical data.

The distribution of Technical Service Bulletins on many subjects pertaining to the modern use of Adhesives is one of the numerous Scientific Adhesive

Services performed by Paisley. Make use of this valuable free service, NOW. Just ask for a copy of Technical Service Bulletin No. 24 on your company stationery, *please!*

FREE ADHESIVE CONSULTING SERVICE

Write for our "Adhesive Operation Data Sheet". Return it promptly with all information requested. This Data Sheet is your guide to getting the ONE best, most efficient Adhesive for the specific operation you describe. Trial shipment will be sent ON APPROVAL, if desired. This skilled consulting service does not obligate you. It's the *SURE* . . . the *MODERN* way to buy Adhesives!

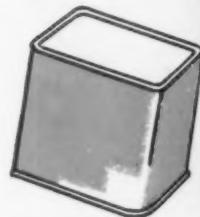
PAISLEY PRODUCTS INCORPORATED
Division of MORNINGSTAR, NICOL, INC.

630 WEST 51st STREET, NEW YORK 19, N.Y. • PHONE COLUMBUS 5-2860
1770 CANALPORT AVENUE, CHICAGO 16, ILLINOIS • PHONE CANAL 6-2219

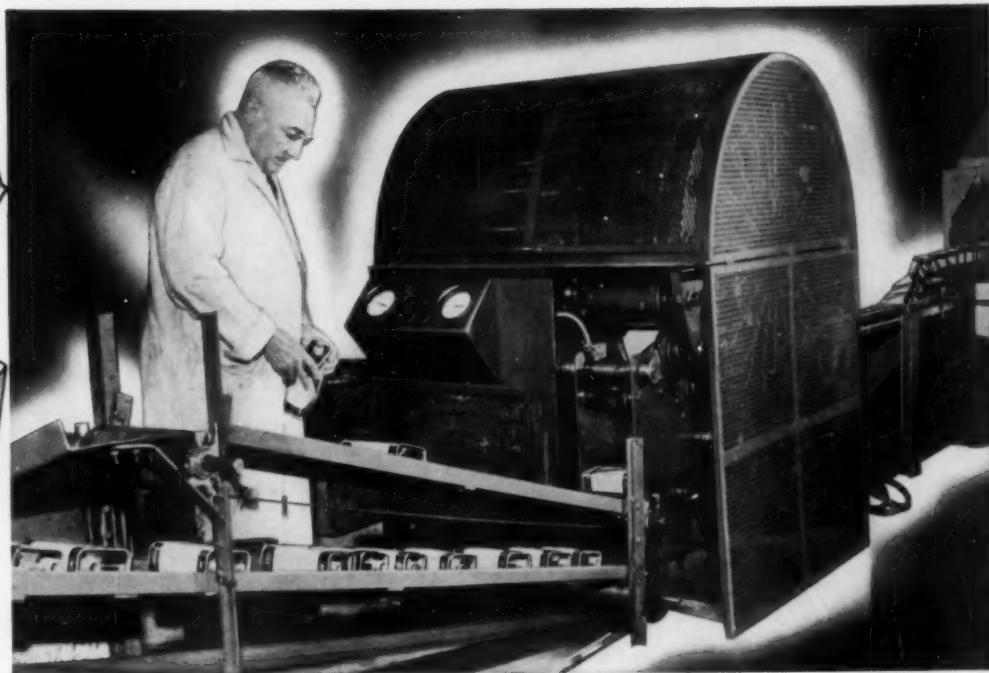
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products



TESTS ROUND CANS
FROM 2" to 4½" dia.



TESTS SQUARE AND
RECTANGULAR CANS
FROM 2½" to 4½"
ACROSS CORNERS
(can be modified for
larger sizes)



The BLISS 318-- Here's a practical can tester for medium speed production lines

The 18 testing heads of the Bliss 318 handle F-style cans in half-pint, pint and quart sizes at up to a 150-per-minute rate . . . square and rectangular cans up to 100 per minute, including those with handles and spouts.

SIMPLE, FOOLPROOF TEST—As cans feed into the Bliss 318, they're enclosed by one of the 18 air-tight testing buckets. Compressed air is then pumped to the can. Even the slightest pinhole leak in the can will cause air pressure in the bucket to rise. When that happens the can is ejected automatically. It's a simple, thoroughly-dependable way to eliminate "leakers".

COMPLETELY AUTOMATIC—The Bliss 318 Automatic Air Can Tester needs no operator. An electrically-controlled stop-and-start feeding system completely eliminates jams—*automatically*. All cans are tested and

passed or rejected—*automatically*. And the simple, rugged construction of the 318 means trouble-free performance, a minimum of maintenance.

COMPACT—Easy to install in your production line, the Bliss 318 only requires a floor space of approximately 5 x 6 feet.

MODERATELY PRICED—The Bliss 318 Can Tester gives you the advantages of many larger testers—at a lower cost! Can you use a Bliss 318 on your line? It's easy to find out. Call in a Bliss Can Machinery Specialist to study your production line set-up and make his recommendations. There's no obligation on your part, of course.

E. W. BLISS COMPANY
50 Church Street, New York 7



BLISS

on your machine is more than a name...it's a guarantee

BLISS CAN AND CONTAINER MAKING MACHINERY



SLITTERS



BODYMAKERS



FLANGERS



SEAMERS



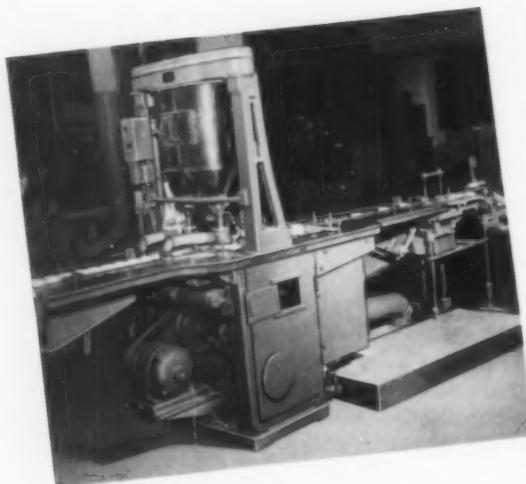
TESTERS



STRIP FEED PRESSES

**Always
a CLEAN
ACCURATE
fill**

**WITH STOKES & SMITH
MODERN FILLING MACHINES**



View of the S & S HG-84 Automatic Heavy Duty Duplex Filler at Avon Products, Incorporated, Suffern, New York



Whatever your product, profits begin with accurate filling. You can maintain this vital accuracy in your operations with S & S Filling equipment. There is an S & S Filler for most every product; paste, granular substance or powder. Prompt attention will be given to your request for complete information.



STOKES & SMITH CO.

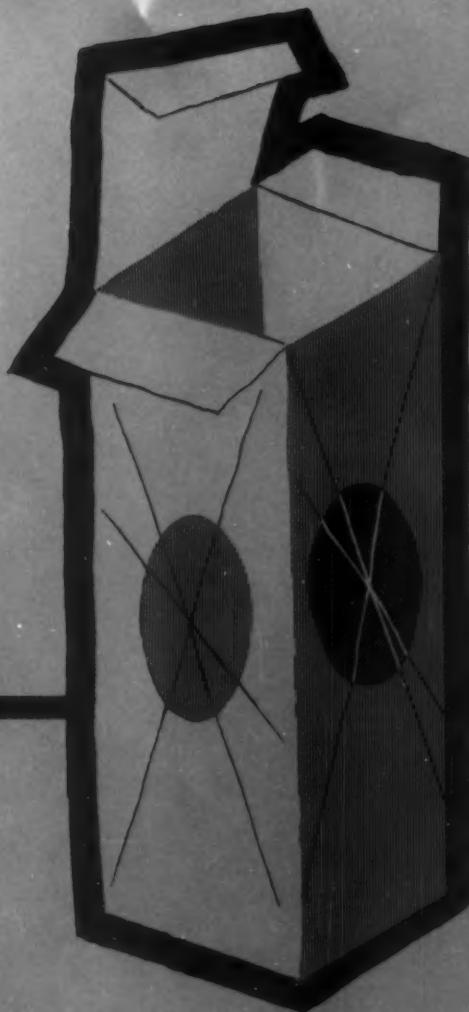
4904-S SUMMERDALE AVENUE, PHILADELPHIA 24, PA.

Pacific Coast: SIMPLEX PACKAGING MACHINERY, INC., 534 - 23rd AVE., OAKLAND 6, CALIF.

SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

TRADE MARK





ARTCOTE COVER

for spectacular folding cartons

Many packagers are surprised and delighted to discover that fine folding cartons can be made directly from Artcote cover. With this lustrous pyroxylin metallic stock that's perfect for cartons, you get a gold that's truly gold, not yellow — a rich, magnificent silver — or a bright, honest-to-goodness copper. And best of all, Artcote Cover prints beautifully by letterpress, offset, flexography or silk screen.

Artcote Cover comes in 7, 10 and 15 point weight. For set-up boxes and for labels, we suggest Artcote papers which are 60#, plain or gummed. All are embossable with our Aurora, Celestial, Hammered or Skytogen patterns.

Available through your paper dealer or from —

ARTCOTE
®

ARTCOTE PAPERS INC.

Irvington, New Jersey

THE

Satisfaction rests on the carton



Many great American companies . . .
among them, Anheuser-Busch, the brewers of Budweiser
. . . have found it good business to include Union among their
major corrugated container sources. Perhaps it would be equally
good business for you. Look into Union facilities
and experience. See how they can increase your
packaging and shipping efficiency.



UNION BAG & PAPER CORPORATION

CORRUGATED CONTAINER DIVISION • Box Plants: Savannah, Ga., Trenton, N. J., Chicago, Ill.

Eastern Division Sales Offices: 1400 E. State St., Trenton 9, N. J. • Southern Division Sales Offices: P.O. Box 570, Savannah, Ga.
Western Division Sales Offices: 4545 West Palmer, Chicago 39, Ill. • Executive Offices: Woolworth Bldg., New York 7, N. Y.



THE R A D O PACK

Efficient

Very economical

Safest in distribution

Simplest, most convenient

Attractive, Displays the product

Lightest, easiest to pack, Unbreakable

ALL the advantages of Unit Packaging are embodied in Packs produced by the RADO SYSTEM—based on the RADO patents—the only fast, efficient way of producing such packages. Further interesting developments pending; ask for details NOW!

We will pack YOUR product in packages of YOUR own design, decoratively emboss them to YOUR wishes, print them attractively to YOUR requirements. Almost ANY kind of liquid, semi-liquid or pastelike product can be successfully packaged by the RADO SYSTEM.

PACKAGING SERVICE STATIONS IN MANY COUNTRIES

R A D O
PACKAGING SYSTEM

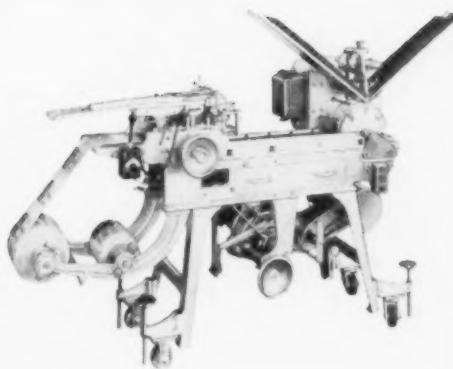
TECHNOPOL LABORATORIES LTD.

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British Patent Nos. 599,174 599,183 and 675,073

U.S.A. Patent Nos. 2,530,400 and 2,517,027

PATENTS IN 36 OTHER COUNTRIES AND FURTHER PATENTS PENDING



fast

economical

dependable

**old words take on a
new meaning with the
LYNCH MODEL SMW
Ice Cream Sandwich
Machine**

The Lynch Model SMW makes, wraps and seals up to 100 Ice Cream Sandwiches per minute. Write for new folder. LYNCH CORPORATION, Packaging Machines, Anderson, Indiana. Branches - New York • Toledo • Chicago • San Francisco • Los Angeles • Atlanta • Dallas • Toronto. Export Dept.: 13 East 40th St., New York 16, N.Y.



Bottles that build sales

Aerosol? Yes! Glass? Yes! Safe? Yes!

**New Wheaton glass-lined plastic bottles
in both stock and custom-made designs**

Wheaton Plastics Company has created an exciting new kind of packaging which offers an important promotional plus.

The Wrisley name on the sample above is convincing evidence that shrewd merchandisers recognize the value of this plus.

Never before has a bottle successfully combined aerosol, glass and plastic. Here is true aerosol . . . tiny droplets in a perfect, touch-controlled spray. And—so vital to the manufacturer—here is 100% safety, recognized by insurance companies. If the bottle is dropped, the plastic cushions the shock. But even though the glass should break, *it cannot cut through the*

plastic cover. The danger of glass splinters is eliminated.

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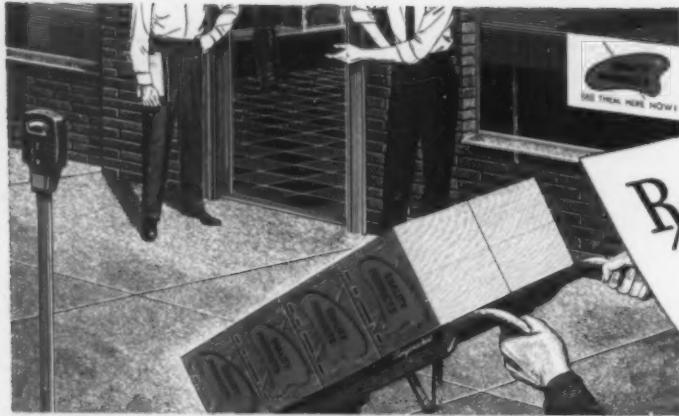
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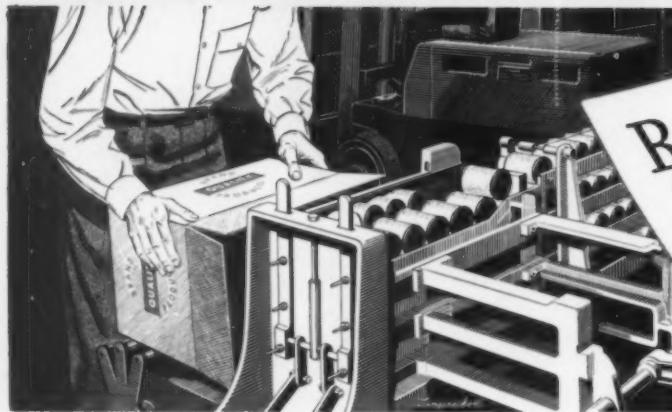




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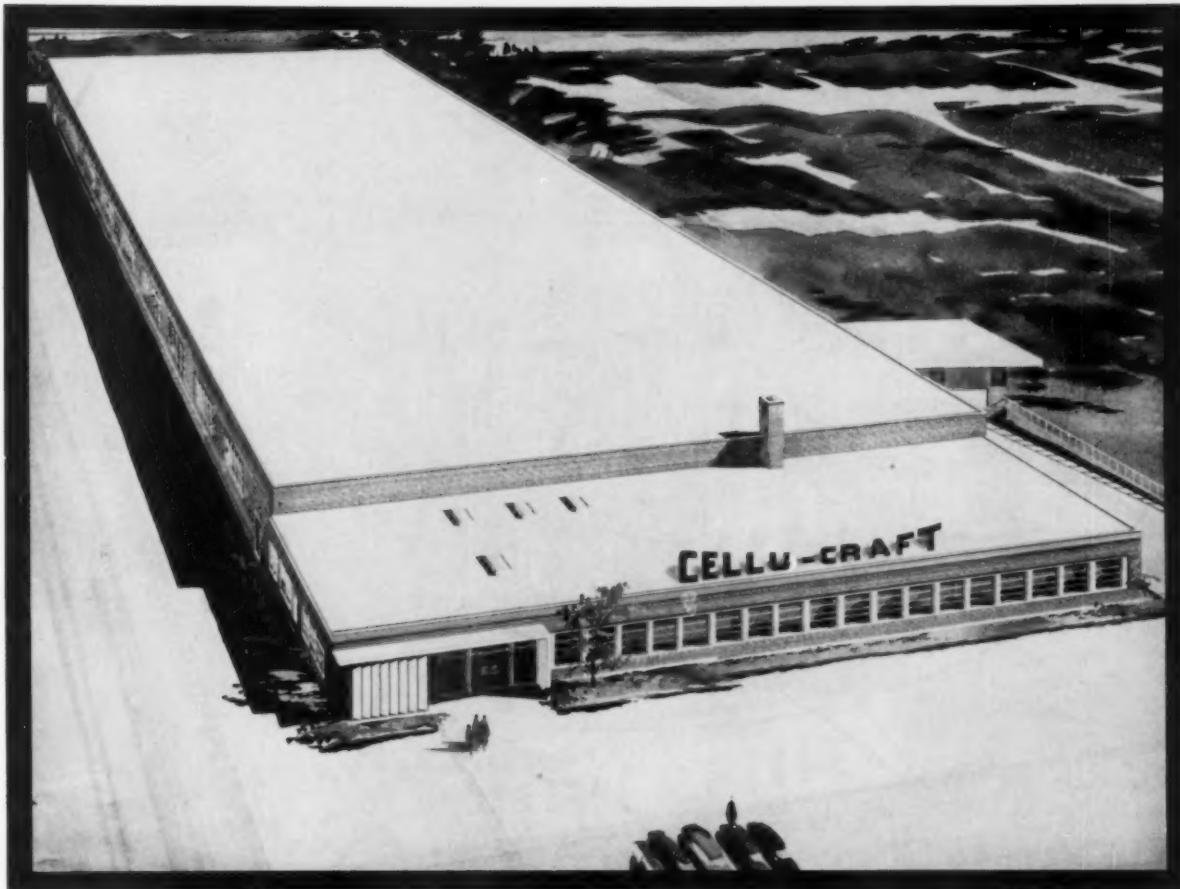
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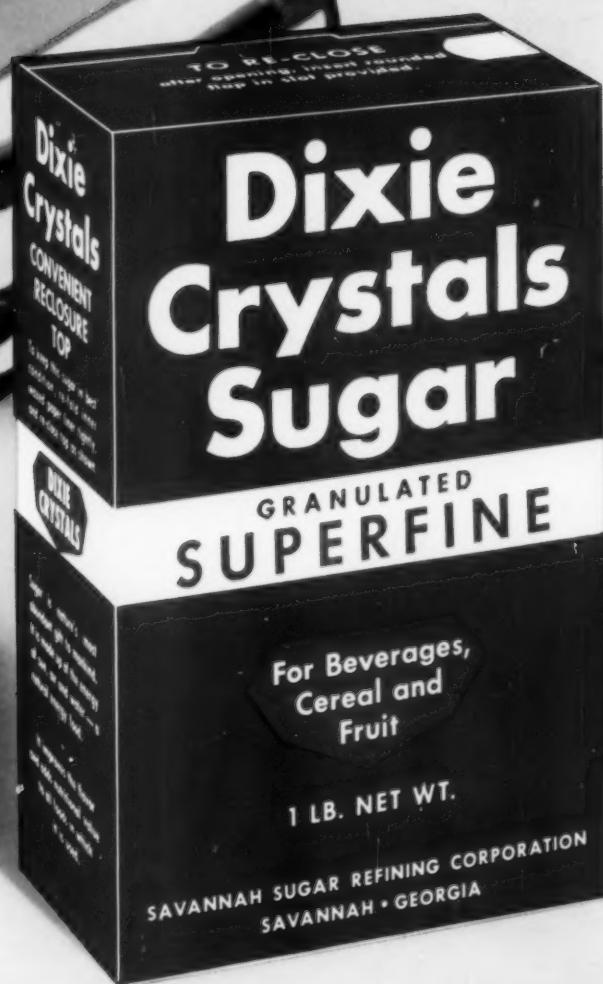
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MODERN PACKAGING

September 1954, Vol. 28, No. 1



PHOTO COURTESY MILPRINT, INC.

MARSHMALLOWS in cellophane bags with four-color rotogravure reproductions of delicious cakes and other items that can be made with marshmallows as an ingredient are lifted out of confectionery category into volume sales when displayed with related items. Clown Confections worked out a tie-in with Pillsbury's annual Bake Off, using Pillsbury carbros and Pillsbury prize-winning recipes.

PICTURE PACKS

The full-color, appetite-appeal illustration is spreading

to a new field in transparent film packaging that deserves close watching

The transparency of cellophane always has been, and probably always will be, the biggest advantage of this pace-making packaging film. Transparency gave a new dimension to packaging that has been one of the greatest factors in sales appeal during the past 20 years.

But paradoxically, cellophane is also capable of being printed with the most realistic full-color effects—and when reverse printed, has unusual sparkle and brilliance that is hard to match. Today a definite trend is developing toward the use of more

of this kind of printing for mouth-watering, full-color reproductions on cellophane packages in food fields where transparency by itself has limitations.

Certain products not particularly appetizing looking in their raw state are beginning to appear in cellophane packages printed with full-color vignettes of ready-to-eat items or dishes of which the product in the package may be only one component. Competitive advantages are being gained for staple items such as rice and beans by colorful food illustrations on

what would otherwise be routine transparent packages. And a wider use of over-all, full-color printing is being seen on cellophane overwraps for cartoned items to provide the brilliant luxury appeal that may be achieved by such packaging.

Full-color rotogravure printing on cellophane is not new, of course. Frozen-food packers discovered early that even a fish fillet—not a particularly inspiring sight by itself—could be made an impulse item when covered with a full-color-printed cellophane wrap illustrating the delicious dishes



COOPERATIVELY, some 6,000 growers of beans and peas are suggesting to housewives across the nation ways to use their products with mouth-watering, full-color illustrations on a series of 18 different cellophane packages, all of them marketed under the one brand name, "Casserole." Volume usage brings cost of color printing within reach of all.

that could be made with the frozen fillets.

The news today, however, is the extension of the can-label-vignette and the cake-mix-illustration technique to a new field that is becoming important enough to be worth noticing. And undoubtedly it will spread to transparent films other than cellophane as color printing techniques advance in this direction. Acetate films, for example, are capable of beautiful full-color printing and have been so printed for occasional use as tomato wraps. Possibilities for printed polyethylene film are indicated by the

beautiful full-color photographic reproduction of an orchid on a Lady Pepperell sheet package.*

Rice and beans

The new trend is particularly noticeable for packaging free-flowing dry products—rice, beans and peas. Southern rice growers have found that full-color photographic vignettes on cellophane bags to suggest dishes that may be made with rice—beef stew with rice, shrimp with rice, chicken with rice, etc.—are an excel-

* See "Full Color on Polyethylene," MODERN PACKAGING, March, 1954, p. 150.

lent means for extending markets into areas where rice consumption is low. The practice is a decidedly good sales builder in areas, such as Ohio, for instance, where rice consumption is estimated at about $\frac{1}{2}$ lb. per capita a year in comparison with 25 lbs. per capita in Southern states.

And despite the fact that a carton is a more convenient, protective package for rice on all scores than cellophane bags, repeated market studies show, for some unexplainable reason, that rice in cellophane outsells cartoned rice seven to one. Appetizing vignettes of dishes showing what can be made with rice, accompanied by recipes on the back of the packages, therefore, make an even better display item. The vignettes, when printed in reverse on duplex bags, have sparkle and a certain third-dimensional quality when seen silhouetted against the rice that is visible through the transparent areas that make the packages immediate eye catchers.

A new line of multicolor packages marketed by the American Bean & Pea Growers, Inc., an organization formed of four of the country's largest dried bean and pea cooperatives, is another striking example of the trend.

This organization, now representing a total of 6,000 growers, is marketing its products under one carefully chosen brand name, "Casserole," used on all packages for navy, blackeye, red kidney, lima, pinto beans as well as peas. All of the packages are printed with full-color vignettes of delicious casserole dishes that can be made with the contents. The whole packaging program is a powerful force in suggesting to housewives

PHOTO COURTESY MILPRINT, INC.



BAKERY FIELD is being strongly influenced by new trend to appetite-appeal illustration, indicated by use of full-color vignettes on cellophane wraps for hamburger and frankfurter buns, rye bread and brown n' serve rolls.

PHOTO COURTESY TRAYER DIV., CONTAINER CORP. OF AMERICA.



color vignettes of the cookies included

the confection in an attractive dish



8 SLICED WIENER BUNS

STOCK DESIGNS provide ample space for printing the baking company's own trade identification, yet permit use of mouth-watering, full-color reproductions of color photographs at costs for the wraps which the average baker can afford.

across the nation ways to use these products and it makes them buy. This vast packaging operation requires 114 rotogravure color cylinders—one for each of the six separate colors used in each of the 18 different Casserole packages—to print the series. Some sources predict that the "Casserole" brand packaging and marketing will revolutionize dry-food-products merchandising throughout the country.

Baked goods

The cellophane picture pack is making headway in the bakery field. In a number of markets hamburger and frankfurter rolls are now appearing in cellophane packages on which are illustrated in mouth-watering color either a delicious hamburger sandwich or a frankfurter in a bun, complete with mustard, ready to set your teeth into. The pale, doughy look of "brown n' serve" rolls through an all-transparent package is being overcome by the use of realistic color vignettes printed on the cellophane showing crisp brown rolls as they will look after the rolls are put in the oven. The picture packages get front display and increase sales.

The H. Piper Co., Chicago, is using a series of color vignettes of three life-like sandwiches—roast, bologna,

ham and cheese—on cellophane wraps for its Old Settler rye bread. The increasing use of cellophane wraps for bread may encourage more of this illustrative treatment as bakers begin to look for additional appeals to attract shoppers to their particular brands.

Dozens of varieties of cartoned cookies and biscuits are currently being marketed with full-color-printed cellophane overwraps solely for the purpose of giving brilliant appetite appeal to the packages. Reverse-printed cellophane gives greater sparkle and dimensional quality than is possible with direct printing on paperboard, even with today's excellent fine-screen printing on board. Many users are convinced that extra money for this kind of wrap is well spent when the aim is to express quality for specialty items that mean new markets.

An important user is Schultze & Burch Biscuit Co., Chicago. This company's Coconut Bar wrap shows an exact reproduction of the cookies printed in reverse in full color on an over-all photographic background of shredded fresh coconut, enhanced by a cool green as contrasting color.

A striking attention getter is the cellophane wrap for Schultze & Burch

bleu cheese crackers with a background all-over printed to represent bleu cheese in full color. Illustrations of the crackers—actual size—are scattered over the background. The shopper cannot miss that these are crackers with the flavor of bleu cheese.

An entirely different approach has been made by the Sawyer Biscuit Co. for the packaging of its Sawyer Club crackers—a luxury product. For regular saltine crackers, Sawyer uses cartons with printing directly on the board. For the luxury product, a cellophane wrap is used—presumably because of the attractive color work that is possible. A full-color illustration of the crackers is depicted on the face of the wrap along with roses and a candelabra in the background, tying in with the sell copy—"the perfect dinner biscuit." The back of the wrap shows four uses for the crackers with full-color illustrations of soup, a salad, a handsome plate of canapes and an attractive arrangement of crackers and cheese—with appropriate suggestion copy for these uses.

Pretzels for the lunch box are appetizingly suggested in a full-color photographic illustration on the all-over cellophane printed wrap for Rold Gold Thin Pretzels, made by American Cone & Pretzel Co., St. Louis,



RICE GROWERS are extending markets into low rice-consumption areas by suggesting dishes to be made with rice in full color on the cellophane packages, with recipe information printed on back of the packages.

Mo. The reverse side of this package shows a dish of the pretzels with a glass of beer. The illustrations are arranged for horizontal stacking on the shelf so that the wide pictures quickly attract the shopper's eye against bright yellow backgrounds.

Any number of other firms are using colorful product illustrations on cellophane wraps for cookies. Among them is Sunshine's Nobility Assortment—a quality put-up with the wrap background printed in gold and with

color vignettes of the cookies included in the assortment. The 11 varieties of cookies are illustrated, repeated top and bottom. Company and brand name are strongly emphasized on all six sides with the "Sunshine Baker" appearing on the ends. The wrap is rotogravure printed in seven colors.

Other firms making use of full-color cellophane wraps are Belle Meade Biscuit Co., Nashville, Tenn., for Pecan Crunch; Robert A. Johnston Co., Milwaukee, Wis., for coconut macaroons; Greg Cookie Co., Birmingham, Ala., for Vanilla Wafers with quality expressed by a beautiful illustration of an orchid as well as a reproduction of the cookies contained; Federal Sweets & Biscuit Co., Inc., Clifton, N. J., for its orange-flavored cookies with illustration of orange and orange blossoms, to suggest the orange flavor, plus a reproduction of the cookies.

Confections

Curtiss Candy Co. is using not only full-color roto-printed cellophane wraps for its Baby Ruth and Coconut Grove cookies—illustrating the well-known candy bars with the cookies—but also for its bagged chocolate confections for supermarket selling—Butterfinger Chips and Baby Ruth Nuggets. Apparently Curtiss is convinced that a full-color illustration of

the confection in an attractive dish has more sales appeal than the actual product in a clear transparent bag.

Very significant is the experience of Clown Confections, Inc., with four-color rotogravure-printed cellophane packages for marshmallows. This company, which is relatively small, wanted a new promotional idea to help sell in competition with some of the big marshmallow suppliers. In a market study, it was found that marshmallows had a rather limited potential as confections, but since they are used in many ways as cooking aids, it was reasoned, there might be an additional merchandising approach with properly planned new packaging.

In cooperation with Pillsbury Mills, the company worked out a program tying in with Pillsbury's big annual Bake Off in New York at which a top prize of \$25,000 is awarded for new recipes involving Pillsbury products. Many of the winning recipes (there are 100 winners each year) call for marshmallows.

Clown Confections arranged with Pillsbury for permission to tie in with the recipes on the back of the packages and Pillsbury supplied Clown with carbro prints of the baked items, some of which—cakes with marshmallow icing, marshmallow fudge bars, etc.—are currently printed in full-color vignettes on the company's marshmallow bags. These will be changed periodically to sustain continued interest.

Clown has found that with this type of picture packaging it is able to get much better displays in food stores with related products required to make the recipes. The packages actually lift the product into a new, volume sales category.

WAXED CARDS, lithographed in full color and placed under clear cellophane wraps are another means of bringing appetite appeal to meat products. These cards have been a real sales builder for R. R. Pressel weiners.



SAUSAGE DISHES printed in full color on these Armour packages make impulse item out of product which otherwise would be rather unattractive in appearance. These packages are duplex cellophane envelopes.



In each shipping case of 24 Clown marshmallow packages, there are six each of the four different designs, giving a store an opportunity to build very attractive displays based on appetite appeal.

Women seeing the illustrations and the recipes on the back with necessary ingredients in bold-face type (a clever idea incidentally) realize they must buy the other items, too. The packages help Pillsbury sell cake flour and mixes, and Pillsbury salesmen carry samples of the Clown marshmallow packages to show store managers. Clown gives this packaging a good share of the credit for the current success of its product.

The firm also has marshmallow packs in polyethylene and likes their keeping quality, but doesn't try to do an appetite-appeal job on them. It reports that it is using cellophane for the picture packs because of the colorful reproductions that are possible on this packaging material.

Color for meats

Meat packers for some time have used the picture-pack idea to sharpen the appetite appeal of sliced bacon by illustrating appetizing breakfast plates of bacon and eggs in full color on the cellophane wraps. This trend is now spreading out to other items in the meat field.

A package for Armour pork sausage is an interesting example in view of the rather unattractive appearance of the product by itself. On the overall printed cellophane wrap are three different illustrations with recipe information on the back. The full-color vignettes show the sausage with scrambled eggs, pancakes or apple rings that suggest the product for

breakfast, luncheon and dinner. The wraps, printed in six colors, are duplex envelopes, permitting the use of reverse printing.

George A. Hormel Co., Austin, Minn., has come out with a similar package for Pure Sausage Meat which has full-color drawings of sausage with waffles, pineapple and peas.

Both companies report an upsurge in business as the result of the new packages and food-store operators like them because the pictures on the packages suggest the sale of other products in the store.

Another indication that the meat industry is definitely trying to catch up with other food fields in the matter of eye-appealing packaging is the present practice of using full-color lithographed waxed cards inside clear cellophane packages of luncheon meats, bologna, etc., to make the packages more colorful and to suggest ways of using the products.

Interesting examples are the full-color waxed cards being placed under the clear cellophane wraps of wieners sold by R. R. Pressel Sausage Co., Detroit, Mich. Five different suggestions for using wieners are presented—wieners cut up as hors d'oeuvres snacks, shown whole with beans, with barbecue sauce, with wiener rolls, etc. The reverse side of the card carries recipe information.

An increasing number of miscellaneous food products is being marketed in cellophane wraps printed with full-color photographic illustrations to give more appetite appeal and suggestions for dishes that may be made with contents. Bardo Products Co., Chicago, is packaging dates in a wrap with an all-over background il-

(This article continued on page 224)



PHOTOS COURTESY MILPRINT, INC.

QUALITY APPEAL is being achieved for cookies, crackers, pretzels, etc., by use of over-all printed cellophane wraps that suggest uses and whet the appetite. Cellophane is used, presumably because of the attractive color work that is possible on the film.



PHOTOS COURTESY THE DORECK-MUN CO.

Aerosol dusts



PHOTO COURTESY INJECTION MOLDERS SUPPLY CO.

The push-button aerosol package may enter a new field of usefulness, if principles demonstrated by several dry-powder products now on the market prove widely applicable.

The possibility of dispensing dry products as well as liquids by using "Freon" fluorinated hydrocarbon as a propellant has been explored ever since the aerosol dispenser arrived as a commercial package. The difficulty lies not in the propellant, which evaporates as fast as it hits the atmosphere, but in the tendency of particles of dry product to clog the tubes and valves, and to react with the various "Freons" after a period of storage.

Success with aerosol paints and enamels, with their relatively large pigment particles, was a step toward the completely dry aerosol powder. Modifications of the types of valves used for paints have proved practical and now there are at least two dry

lubricants on the market in aerosol cans.

Development work in progress indicates that aerosol packages for such dry products as dusting powders, insecticidal dusts, fungicides, foot powders, talcum and even costly antibiotic powders may shortly be seen.

Considerable evaluation of the powder, however, is essential because various materials may tend to react with the "Freon" propellants. While first tests may prove encouraging and the package may seem successful, shelf-life tests may give adverse results. A great deal seems to depend on the specific gravity of the powder in question, as well as its particle size and its reaction with the fluorinated hydrocarbons used in propellents.

The commercial pioneer in this new field, apparently, is a dry powder spray of zinc stearate, marketed by the Injection Molders Supply Co.,

Cleveland, for plastics molders. Molders have long sought an effective answer to the problem of parts sticking in the mold. I.M.S. earlier had developed an aerosol-packaged liquid silicone lubricant.

However, the silicone mold release, while suitable for many applications, met resistance because many molders were accustomed to using impalpable dry zinc stearate powder as a mold release. This dry powder was dusted on the mold by makeshift means such as cloth bags, dusters, douche tips, etc. Much dust was wasted. In addition, excess dust got onto moving mold and machine parts, where it caused excessive wear, actually acting as an abrasive.

I.M.S. several years ago developed a hand-operated atomizer to dispense zinc stearate powder. The dispenser, however, was flimsy and did not stand up too well in use, and the company continued to search for a satisfactory means of dispensing dry zinc stearate.

The problem was turned over to the research department of a custom aerosol loader in 1951. Initial experiments in handling this powder happened to dovetail with other powder-dispensing techniques already under consideration by the loader's engineers. Original complications encountered in filling and handling early samples of this material have now been largely eliminated, it is claimed, so that, with present knowledge, virtually any powder can be handled.

Obviously, particle size, type of material, compatibility with propellents, specific gravity, bulk factor, etc., all must be carefully considered in planning a dry powder aerosol.

Pilot runs and field sampling were undertaken early in 1953 to determine not only customers' acceptance of such a radical new package, but also shelf life and numerous other technical problems connected with development of a self-powered dry pow-

Push-button dispensing of powders is now possible;

a whole new field may open up if certain problems can be solved

der dispenser. Chief among the problems encountered was clogging of the valve mechanism and nozzle, or terminal orifice. Most of this difficulty was eliminated by using an all-metal, removable, cleanable spray head.

In packaging their silicone liquid-spray mold release, Injection Molders Supply Co. found a considerable number of complaints, they report, arising from the action of the pure silicone material on valve and can components, mainly the sealing compounds used in the bottom double seam of the container and the flowed-in gasket compound in the valve cup. The silicone actually replaced the dibutylthalate and other sympathetic types of plasticizers where a replacement was possible. Phosphate plasticizers appear more resistant to the action of the silicones, but the problem of gasketing to prevent seepage of silicone and propellant is still under study.

In the zinc stearate package no difficulties of this type have been en-

countered to date and shelf life of the powder dispenser package components is said to be several times that of the more active silicone.

The various "Freon" fluorinated hydrocarbon propellents used in the I.M.S. liquid aerosol act as a dispersant for silicone, making dispensing uniform and simple. However, in packaging a dry powder such as this special formulation of impalpable zinc stearate, a solution or a wetting action of the powder does not occur. In fact, much of the powder actually floats on the propellant. As a result, considerable study was given to the question of whether or not to use a siphon tube in the package. If a tube is used, it is not necessary to invert the container and customer considerations finally dictated use of the siphon tube. The user is, of course, instructed to shake the container before spraying to agitate and mix the powder with the propellant, but normal handling and the fact that some of the powder

is designed to settle to the bottom always results in the propellant carrying enough powder to give the mold a suitable coating. In fact, one of the features of this package is that it cuts down on the amount of zinc stearate that is wasted and which settles on mold and machine parts causing abrasion. Another advantage is the speed and ease of application on a limited area of mold surface. It is much easier to reach inaccessible corners of deep cavities, it is said, with the dry aerosol.

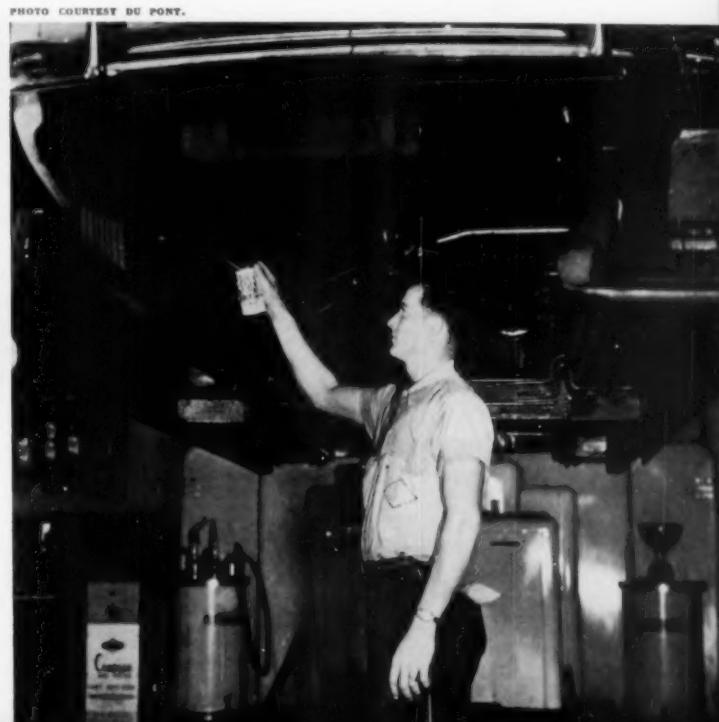
At one time the use of a glass ball to mix and stir the solution was considered, but tests proved it unnecessary in the case of zinc stearate and indeed the loader's engineers feel that if a dry powder solution is properly balanced, the use of a mechanical agitator is not necessary in dispensing powders by an aerosol.

So perfect is the atomization with the aerosol method, it is reported, that *(This article continued on page 213)*



UNDER DEVELOPMENT are other types of aerosols for dry products such as insecticides, talcums, dusting powders. Photo shows use of experimental one filled with 15% talcum powder, 85% propellant.

DRY GRAPHITE lubricant, sprayed from aerosol can, provides quick, easy way to reach hard-to-lubricate spots such as automobile springs. It is also used to dust engine parts prior to re-assembly.





The new package offers the utmost in protection

FLAP is lifted on the individual envelope which encloses each bag . . .

PERFORATED SECTION lifts one free corner, string is attached . . .

OUT COMES tea bag, with string looped around and under it . . .

A new kind of tea

Sir Thomas Lipton's first tea bags were tied and trimmed by hand. By 1927 this was being done automatically. Then the sewn, pillow-type bag was adopted. After World War II a thermoplastic filter paper was introduced for making heat-sealed bags and a double-head machine, which could make, fill, seal and turn out up to 90 bags a minute on each head, was considered the ultimate in automatic packaging.

But 25 new German-built machines, now operating at the Thomas J. Lipton, Inc., plant in Hoboken, N. J., are proving that what seems

like the ultimate can often be surpassed.

Considered by the Lipton firm to represent one of its most revolutionary advances in packaging, the new machines (1) produce an entirely new kind of tea bag, eliminating heat sealing and hence eliminating thermoplastic resins; (2) seal each bag individually in a protective, easy-opening, printed paper envelope with an integral string and tag and (3) count and load the envelopes automatically into retail cartons. Step 2, considered by Lipton to be important to purity and flavor, had never

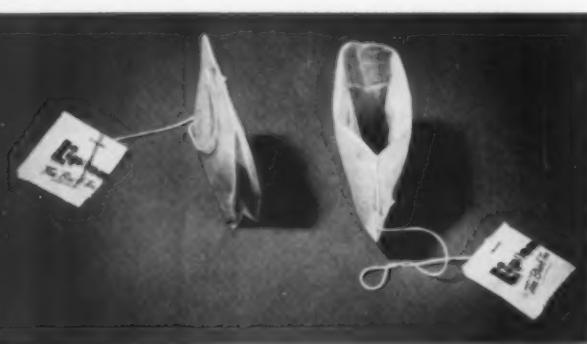
been done before and Step 3 had never been accomplished mechanically.

The new machine does all this in a continuous, integrated operation and requires the services of only one attendant.

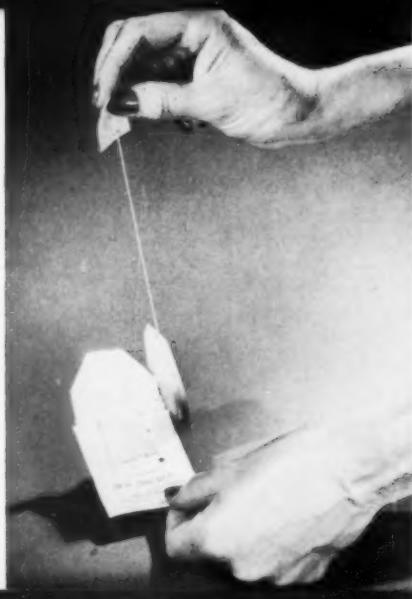
Under the old system additional attendants for each machine were required just to pick up the naked bags in counted quantities, stow them by hand in a bulk glassine bag and insert the bag manually in the tuck-end retail carton.

Aside from the obvious production economies, Lipton's sees important gains in tea flavor, faster diffusion in brewing, protection and consumer convenience.

A small amount of thermoplastic resin is required to provide heat-sealing qualities in the conventional tea bag. With the new Lipton bag, only intricate folds of pure filter paper, in conjunction with a stapled end, are required to hold the tea in the bag during the forming and filling stages on the machine and while being brewed in the home. The possibility of the tea sifting out of the bag is practically nil.



BAG LOOKS (left) like a single gusseted bag, but is actually (right) a loop, gathered, folded and stapled with no heat sealing. Tea is in pockets on each side of loop, for quicker diffusion in brewing.



and convenience

AND PRESTO! bag does a flip-flop and is ready for dunking in cup.

The altogether different construction of the tea bag itself is said to promote faster brewing. The reader can best visualize it by imagining a long, narrow tube of the filter paper, with two "dumps" of tea about $\frac{1}{8}$ in. apart, the ends of which are brought together in something like a druggist's fold longitudinally, then doubled over in a U-shape and stapled at the top, with a string attached to the staple. In effect, this forms a doughnut shape with an opening in the middle and the two "dumps" of tea on opposite sides of the doughnut. Thus, in brewing, the hot water can circulate through and around the open-center bag and reach the two pockets of tea from all sides. Quicker brewing is also facilitated by the more porous paper now in use. This increased porosity is made possible by the elimination of the thermoplastic elements and the use of a lower base weight paper.

The other end of the tea-bag string is stapled to a perforated section of the containing paper envelope, under the folded-down flap, which is crimp sealed with the sides of the envelope. Opening the envelope and removing the bag is a marvel of convenience. On lifting the flap, the perforated square is revealed; when a corner of the perforation is lifted, the whole square pulls loose and with it is lifted the string and tea bag, ready for dunking in the cup like any other type of tea bag.

The tea bag itself need never be touched by human hands, either in the plant or in use. As the string is lifted, the bag does a surprising flip-flop and practically dunks itself in the cup.

Printing and die cutting of separate tea-bag tags—which was previously done in Lipton's own plant—is eliminated. The paper envelope which provides the tag also provides the

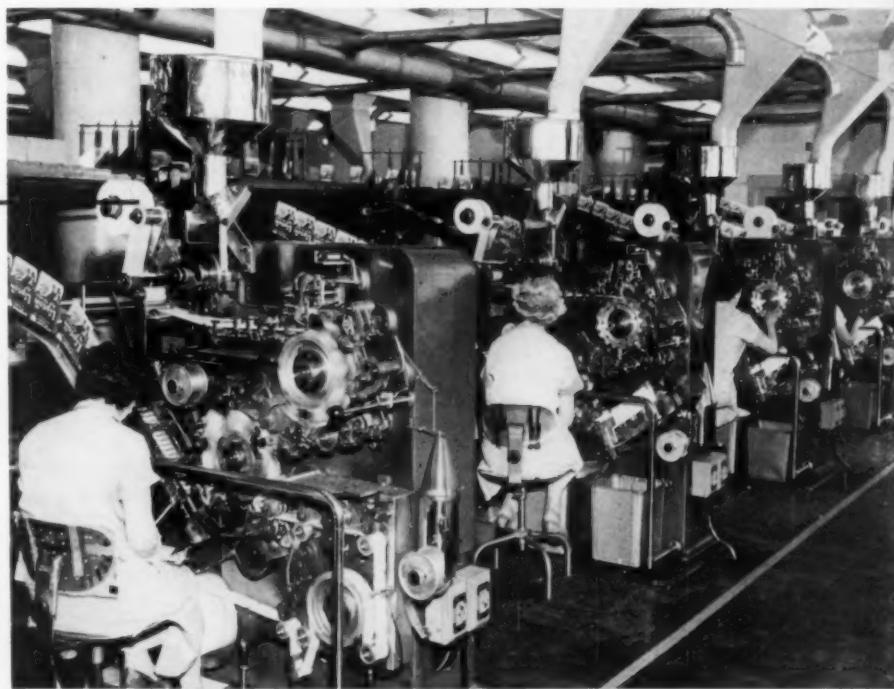
bagger

Lipton's adopts German mechanical marvel which forms tea bags without heat sealing,

inserts each in an envelope and puts envelopes by count in cartons

PART OF THE BATTERY OF 25 MACHINES

FIRST OF ITS KIND in this country, each machine forms bag from roll of filter paper (upper left), fills it with two pockets of tea, folds and staples it with string (from conical container at lower right), forms a paper envelope (from roll at bottom right), perforates section and attaches string from bag, inserts the bag, seals the envelope, counts and inserts desired number of envelopes in retail carton (left). Only the front machine in this row has roll feed of envelope material; the others feed die-cut envelope blanks.



rigidity necessary for automatic cartoning.

Starting at one end with a roll of filter paper, a single machine forms, counts and delivers the formed tea bag in its crimp-sealed paper envelope to a carton. It must allow for the natural variations in all of the materials involved and still run smoothly. It is here that the engineering genius of the mechanism is most evident. With the precision of a fine watch, the new Lipton tea-bag machine operates as follows:

The highly porous filter paper unwinds through driven control rollers which help keep it taut during the complicated folding procedure which is to follow. The paper is cupped as it passes under an unusual filling station, involving a hopper which feeds tea through both an upper and lower wheel and into the web of paper.

The upper wheel, rotating in a clockwise direction, is made up of eight pockets, each of which picks up an exact fill of tea.

The revolving pockets dump the fill into the wheel below, which is revolving counter-clockwise and has four pockets. These 12 pockets are needed to keep pace with the web, which is moving at a speed of 68 ft. a minute.

From the lower wheel the tea is loaded onto the web, which at this point has been made trough shaped by folding horns. This is the first step in folding the web of filter paper into a pouch.

The paper is folded upon itself three times by wheels and folding horns, resulting in a tube with one folded center seam. A guillotine knife cuts off a section of the tubing and the result is two dumps of tea in the tubing separated by about $\frac{1}{8}$ inch. Both ends, still open, are brought up together over a pleating mandrel, which is part of the bag conveyor wheel, and a pleating knife puts a firm crease in the bottom of the bag. As the wheel rotates, a confectioner's fold is made on the open ends of the bag at three head-folding stations.

An end of string, fed from a bobbin-like spool, is next stapled to the folded ends of the bag and cut to length by a knife. The bag is pulled from the conveyor wheel by grippers into an inverting chamber and, as the bag rotates 180 deg., the string is looped around it.

Meanwhile, the paper envelope which is to hold the tea bag is being formed on a conveyor wheel directly below the inverting chamber. On the original model of the machine, single,

die-cut, flat sheets of envelope paper were fed from a hopper on the lower portion of the machine. Later the machine was converted to a roll feed, which resulted in a substantial saving in cost. Tractive rollers pull the paper through a cutter box which has two parallel knives to perforate the portion of the envelope which is to form the tea-bag tag. Perforation is done in such a way that only three corners remain tacked to the main portion of the envelope, leaving a free edge for pulling.

Gripper fingers on the pouch wheel open and a tucker forces the envelope into the fingers. The envelope is now cupped to receive the bag at the next station as the wheel revolves counter-clockwise in an intermittent motion. Grippers on the pouch wheel pull the tea bag out of the inverting chamber above into the pouch which is still only semi-formed.

It is now necessary to staple the trailing edge of the string (which has been looped around the bag in the inverting chamber) to the slit section of the pouch. The machine does this, accurately positioning the staple at the top of the slit section.

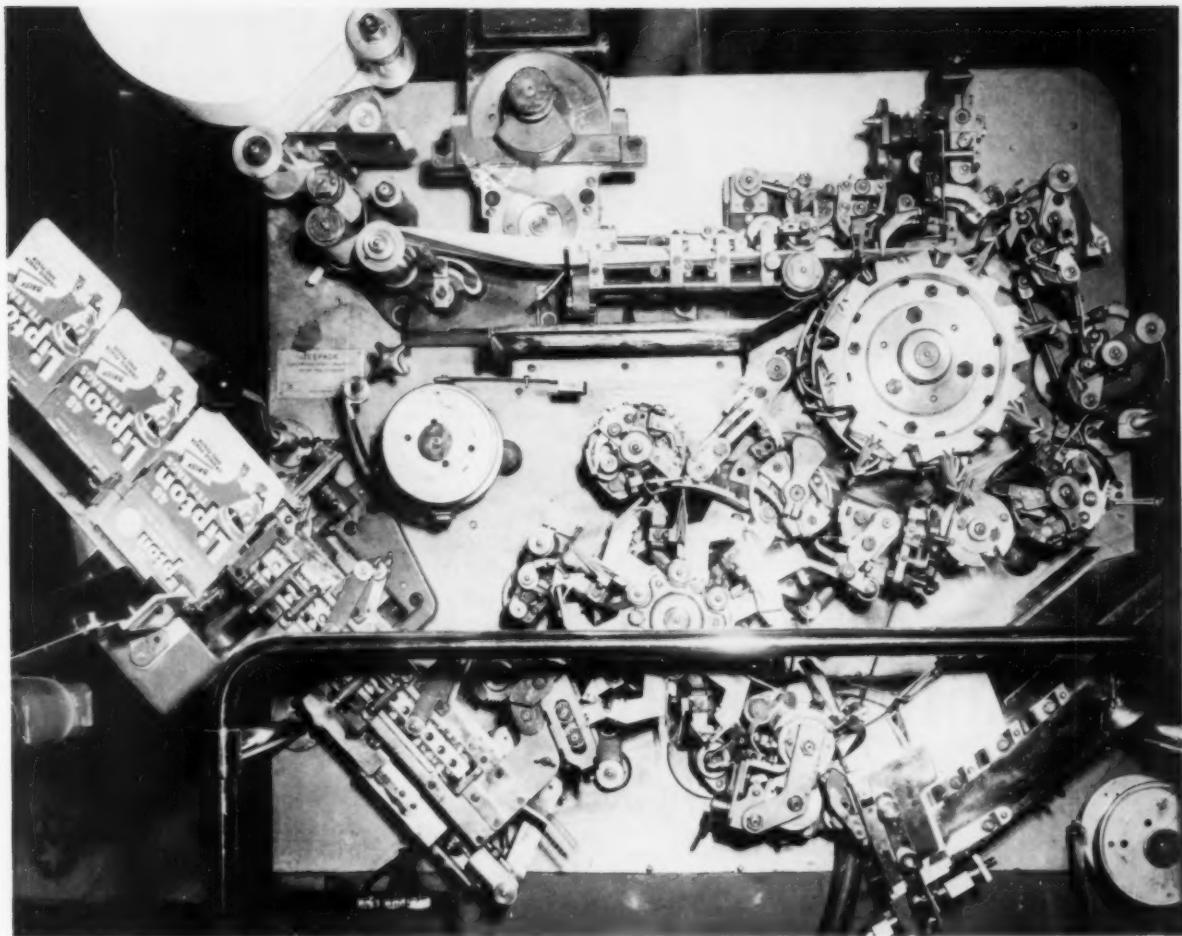
At the next station the tapered flap of the envelope is folded down and over this perforated section. Ingenious



CARTON INFED is from overhead line, into automatic counting and cartoning magazine at lower left of machine. Note filled carton at left moving away on conveyor belt to the cellophane overwrapper.



MODERN PACKAGING



LIKE A FINE WATCH, is mechanism of compact machine. Counter-rotating wheels deposit precise weights of tea on filter-paper web as it is formed into tube, then into bag. Delicate feeds are necessary for extra-porous, non-impregnated paper.

crimping wheels effect closure on both sides of the envelope, which up to now have remained open. The same wheels pull the envelope from the grippers and deliver the completed individual tea-bag package to a stacking and counting device.

The crimp seal is highly unusual. No glue or thermoplastic is used, yet the edges of the envelope are so firmly held by the close-spaced and deeply drawn crimp that it is difficult to pull them apart. The edges of the folded-down flap are caught and sealed in the same crimping action, leaving the tapered end free for opening. As the flap end is pulled upward in opening, it tears along the crimp seal at the edges as if it were perforated.

The stacking and counting device, an integral part of the one machine, takes unit packs, counts them by 16s or 48s and places them in a carton.

Tea bags are alternately placed right-side up and upside down on transporting rails which bring the bags up at an angle of 45 deg. to the bag-counting and carton-filling station. The alternating method makes for a more balanced pack by fully utilizing the space in the carton.

After the density of the tea has been determined, it is then figured how much space is necessary for a fixed count. A rod which is spring loaded keeps moving in an upward motion until there is sufficient pressure exerted on rod and spring to remove a dog or pall from a small chamber which in turn releases a plunger. The plunger pushes the tea-bag pouches into a carton which has moved into position under the counting chamber. One side of the carton is indexed with tea bags and then the other side, and the flaps are tucked.

As a final step, the cartons are car-

ried away by a conveyor to another machine which overwraps them with cellophane to provide protection from moisture and odors. The overwrapped cartons are then placed in corrugated shippers.

Distribution of the new Lipton tea bags is still limited to the New England area and will probably be extended to other areas when additional machines are available.

CREDITS: "Constanta Teepack" machine by Spezialmaschinen GMBH, Viersen, Dusseldorf, Germany. Tea-bag filter paper by Aldine Paper Co., Inc., 535 Fifth Ave., New York 17. Die-cut envelope sheets by William W. Fitzhugh, Inc., 49 St. & Second Ave., Brooklyn 32. Roll material by Marathon Corp., Menasha, Wis. Stitching wire by George W. Prentiss & Co., 439 Dwight St., Holyoke, Mass. String by Premier Thread Co., Pawtucket, R. I. Cartons by Alford Cartons, Industrial Ave., Ridgefield Park, N. J.

EMBOSSED DIVIDERS in carry-home carton minimize breakage of one-trip bottles of Budweiser. Embossed, full depth and of single-wall construction, they give added cushioning between bottles with little or no increase in cost. No additional material is required and no production delays are involved.



Cushioned bottle carriers

Anheuser-Busch finds protection increased 65% by simple embossment of partition walls, without any added material

In 1953, the U. S. brewing industry used approximately 150 million carriers designed to hold six single-trip, no-deposit bottles, along with some 500 million six-can cartons. Despite the fact that the bottle carriers have done an excellent job of enabling the industry to keep abreast of new merchandising trends created by the rise of self-service stores and supermarkets, the problem of bottle breakage in rail and truck transit has been a source of continuing concern to brewers. Now, through a new cushioning method evolved by the package engineering department of Anheuser-Busch, Inc., St. Louis, which requires no added material in the carry-home carton and can be accomplished without production delays at little or no increase in cost, an interesting approach toward overcoming this difficulty is indicated.

The earliest six-bottle carriers used for beer were direct copies of the then existing soft-drink bottle carriers, offering little if any protection between individual bottles. This type of car-

rier admirably suited the requirements of soft-drink and beverage concerns using a returnable bottle trucked only short distances, but did not provide adequate protection for bottled beer. Brewers soon discovered that added protection between bottles was necessary to minimize breakage. At the insistence of the Uniform Classification Committee of the Assn. of American Railroads, a carrier for six one-trip bottles was developed which provided 28-point fibreboard partitions between bottles. A package number under Rule 41 was assigned to this bottle carrier and nearly all shipping breweries have since adopted it, with minor variations, as standard design.

During the past year, the Uniform Classification Committee has held a number of hearings covering methods of improving the protection offered by the bottle carrier. Carrier designs with corrugated inserts, submitted at these hearings, have been found unacceptable to both carton manufacturers and brewers. The former are concerned over the limitations that such a carrier

would impose, while brewers feel that its poor stacking characteristics would handicap the setting up of store merchandising displays. The brewing industry would prefer, if possible, to stay with the existing 28-point full-depth carrier design, provided some means could be found to increase bottle protection during shipment and handling.

Working along these lines, the Anheuser-Busch package engineering department, directed by Nicholas D. Ellis, recently developed an embossed partition carrier for its one-trip beer bottle. By utilizing the existing design and incorporating one of several types of embossments on the inner full-depth dividers, added cushioning and protection are provided at the point of bottle contact. While Anheuser-Busch has applied for patent protection on the development, it has already licensed several carton manufacturers on a non-exclusive basis to produce cartons with this feature.

As shown in an accompanying sketch, the embossments may be



THREE TYPES of embossing used on partition walls are shown in these cut-away photographs. Left to right: button embossments, bar embossments, fluted embossments. For maximum bottle protection, Anheuser-Busch recommends that the total height of the embossments, including the board thickness, be a minimum of approximately 60 points.

either all in one direction or in opposite directions. Tests conducted by Anheuser-Busch indicate that the height of the embossments, including thickness of board, should preferably be a minimum of approximately 60 points. With alternate "button" embossments, it is possible to go as high as 100 points, or more than three times the actual thickness of the fibreboard. As with "A" flute corrugated board, the higher the embossments, the greater the amount of cushioning provided between bottles.

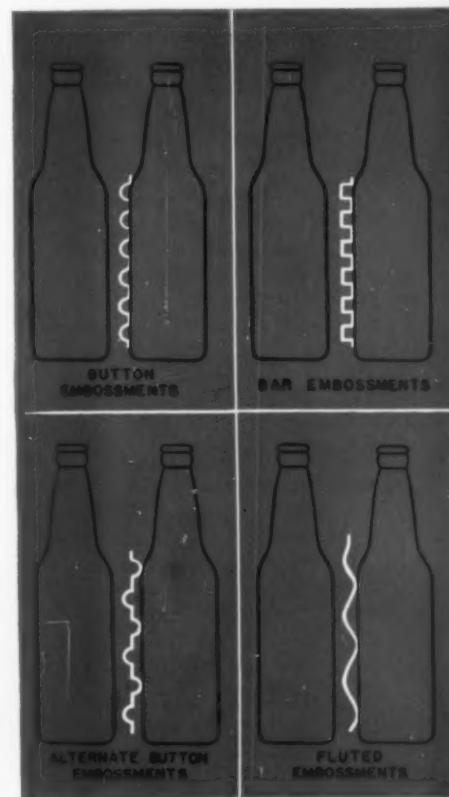
Important from the production standpoint is the fact that these embossments can be formed easily on the cutter-creaser or between emboss-

ing rolls by any of the carton companies making bottle carriers. The embossments in no way hinder production speeds and can be made at very little, if any, added cost, it is said.

Although actual shipping data covering the performance of the embossed carriers are not yet available, due to the short time that has elapsed since they were first placed in distribution, Conbur impact studies conducted both at the Anheuser-Busch laboratory and by outside independent laboratories, indicate that impact protection to the bottles is increased by approximately 65% in comparison with conventional carriers for six no-return bottles. The results of these tests are

summarized in the accompanying table.

Three types of embossments—button, bar and fluted—are incorporated in the new Anheuser-Busch carriers. Accompanying photographs of actual carriers with parts of two side walls (*This article continued on page 240*)



CROSS-SECTION drawings of various embossments tested show that the purpose of the embossments is to provide more space and greater cushioning between individual bottles in carrier.

CONBUR IMPACT STUDY						
Container	Control			28-pt. carrier		
	Impacts	Distance	Footfalls	Impacts	Distance	Footfalls
	(No.)	(ft.)		(No.)	(ft.)	
1	9	at	1 = 9.0	9	at	2 = 43.0
2	1	at	2 = 27.0	9	at	1.5 = 23.5
3	2	at	1.5 = 13.0	8	at	1.5 = 22.0
4	9	at	2 = 43.0	2	at	1.5 = 13.0
5	3	at	1 = 3.0	4	at	1.5 = 16.0
6	1	at	1.5 = 11.5	8	at	2.5 = 65.0
7	6	at	1 = 6.0	1	at	2 = 27.0
8	1	at	1 = 1.0	1	at	2 = 27.0
9	4	at	1.5 = 16.0	7	at	1.5 = 20.5
10	9	at	1 = 9.0	2	at	1.5 = 13.0
11	3	at	2 = 31.0	2	at	2 = 29.0
12	2	at	1.5 = 13.0	6	at	2 = 37.0
13	2	at	1.5 = 13.0	1	at	2 = 27.0
14	9	at	1 = 9.0	6	at	2 = 37.0
15	1	at	2.5 = 47.5	6	at	1.5 = 19.0
16	1	at	2 = 27.0	9	at	2 = 43.0
17	2	at	1 = 2.0	5	at	1.5 = 17.5
18	2	at	1 = 2.0	5	at	1.5 = 17.5
19	4	at	1 = 4.0	3	at	1.5 = 14.5
20	1	at	2 = 27.0	3	at	1.5 = 14.5
Average		15.7 footfalls			26.4 footfalls	



PHOTO COURTESY HARDWARE AGE

THE OLD WAY was to stock everything in storage bins from which every item had to be tediously counted out, one by one, when customer made purchase.

THE NEW WAY permits shoppers to make their own selection of thousands of hardware items neatly packaged in units arranged attractively for display.

Thumb through the advertisements in any hardware publication today. What do you see? Almost every ad for small items features something like this: "Now in convenient new packages." "Now in attractive retail put ups." "Time-saver packs." "Self-service merchandisers." "Handy kits." "Carded arrangements." "Counter display units."

Hardware has become one of the most active fields in packaging. The hardware store is going the way of all merchandising. The country's more than 34,000 independent hardware dealers are becoming self-service operators in spite of themselves. And the degree to which self service is penetrating this field of retailing runs all the way from a few counter units and fixtures arranged for self selection—"quick service" as hardware retailers prefer to call it—to the over-all self-service operation like Murmak's Serv-N-Save Hardware Mart in Los Angeles, which looks for all the world like a food supermarket complete with push carts and check-out counters.

The high cost of labor and the shortage of efficient sales personnel

Hardware



have forced the hardware retailer to self service. And manufacturers of the 50,000 or more items sold in hardware stores—by their own necessity to increase sales—are having to create the kind of packaging that makes it easier for the retailer to sell. The magnitude of this packaging in the \$3-billion hardware industry may be visualized when it is compared with the 7,000 or 8,000 items handled in the average food supermarket.

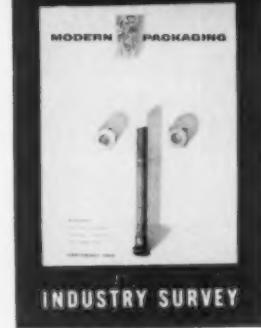
No longer are there enough people behind the hardware counter to weigh out $\frac{1}{4}$ -lb. quantities of nails or to spend their time counting out nuts and bolts. The nuts and bolts and nails are already counted out and packaged in convenient unit packages, ready for sale and displayed on a shelf where the shopper can help himself. Like-

wise, products which come in lengths such as wire, rope, garden hose, etc., no longer have to be measured off for each purchase, but come packaged in popular lengths. Even weather stripping is being packaged in popular units—just enough footage for a window or a door—in unusual new space-saving, cone-shaped packages with interesting display features.¹

Manufacturers of hardware, too, are thinking not merely in terms of convenient units, but of attention-getting packaging that gets products from under the counter out front where they will be seen and create the impulse to buy. It is the kind of packaging that reminds Pop, while he is in the hardware store to buy a new

¹ See "Built Like a Beehive," this issue, p. 118.

Convenient, colorful display packaging brings
50,000 different items out of hiding
into the limelight of orderly self selection



latch for the storm door—that he needs some new knobs for that old chest he's fixing up for Junior's room—or that makes Mom buy that cute little telephone light when she went in to get a couple of paring knives.

Such packaging calls for all the design devices and colorful effects that have been found so successful in all other fields of modern merchandising. And it demands packaging that will stand out from the crowd of continually increasing packages competing for a place on the hardware counter.

Several other important forces are at work to put new demands on hardware packages:

1. The trend of the hardware store to extend its coverage far beyond what is traditionally considered hardware until many of these retail outlets are virtually department stores with extensive houseware and appliance departments, gift novelties, toys, sporting goods, outdoor furniture, photographic supplies, etc.

2. The growing popularity of hardware and houseware departments among the non-food items sold in the supermarket.

3. The swing to self selection in the hardware sections of department and variety stores.

4. The "do-it-yourself" craze which has created a demand for millions of paint kits, plumbing kits, wallpapering kits, etc. Industry experts estimate that 75% of all paint and 60% of all wallpaper will be bought this year by consumers who plan to do the work themselves. The home-tool business is flourishing with the help of workshops in 11,000,000 homes and the magazine, *Electrical Merchandising*, reports that the current market for power tools is about \$200,000,000 with a potential of about \$500,000,000.

Expansion of the hardware store into housewares, large appliances, furniture, farm and garden implements naturally limits the possibility of 100% packaged self-service operation. And not every hardware store can handle all of the 50,000 items classified today as hardware. There appears to be a tendency, however, to stock large assortments of the most popular packaged items and to specialize on the larger items—sporting goods, electrical appliances, power tools, etc.—depending on local competitive conditions. In this way, hardware outlets may divide their activities into two parts—one for the packaged merchandise where the customer may serve himself and take his selections to the

check-out counter and the other for the bigger ticket items which need the assistance of a salesperson.

These packaged departments deserve the serious attention of every manufacturer of small hardware items because the package may determine the difference between success and failure.

The kind of merchandising thinking that is going on today is indicated by the recent experience of the McGill Metal Products Co., Marengo, Ill., which, if it hasn't built a better mouse trap, reports that it has turned out a definitely better package for selling them—a printed polyethylene bag with a paperboard header containing two traps.

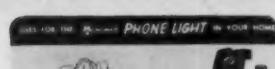
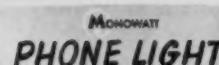
Said a company official: "For many



DO-IT-YOURSELF appeal creates a whole new field for packaging hardware. Hoco home plumbing kit is designed for women, complete with 16-page instruction book. Transparent lid clearly shows contents of kit.



SELF SERVICE as complete as a supermarket, but the products are hardware. The store is Carlson's, Cincinnati, one of about 500 hardware stores that have quick service to the check-out counter or service desk.



**Display is
essential to
selling techniques**



DISPLAY shipper for Armstrong's counter-top cement puts emphasis on ease of installing plastic counter top.



DEMONSTRATOR for Magnagrip relies on old showman trick of let 'em try and they'll buy it. A dozen individual cartons anchor the rack and allow customer to select one.



PHOTO COURTESY GERALD STAHL.

years, the accepted way of merchandising traps has been to throw several gross into a bushel basket, place it on the store floor and depend on the potential customer to ask for mouse traps or fall over them!

"We now have a package that a merchant is glad to display. The new '2-Pac' is based on the knowledge that a large percentage of mouse traps is purchased by the housewife and the neat, clean polyethylene pack is especially attractive to her.

"Retailers particularly like the automatically increased unit sale to two and the time saved by pre-pricing on the saddle label."

Hardware packaging isn't always obvious or simple. It lends itself to

endless shapes, styles and materials. And the selection of the right one is not always so easy as in some other fields. A can may be the obvious container for a soup. But what is an obvious container for an egg beater?



MULTIPLE SALE of two mouse traps is encouraged by McGill Metal Products Co. duo put-up in printed polyethylene bag with saddle label attached.

It has been a constant challenge to the hardware manufacturer to devise packages that physically suit the products, regardless of how irregularly shaped, how small or how bulky they may be, how difficult they may be to protect, or in what quantities they should be sold. In addition, the packages must be such that they can sell themselves without the aid of a sales clerk, if need be.

The rules for packaging hardware products for self-selection selling, regardless of the form of the package, are similar to those that apply in principle to all packaging for today's markets:

- Offer convenient selling units that conserve space, yet provide a complete assortment of sizes and quantities in proper display containers or fixtures.
- Be sure the packaging is sturdy enough to withstand the rough and tumble of open display.
- Employ transparency when possible so that the shopper can immediately identify contents.
- Provide as much copy on the package as the customer will need to tell what the product is and how to use it.
- Emphasize the many uses of a product—particularly if there are more than one.
- Reserve an area on the package for price marking.
- Place product identity on all surfaces of the package so that brand or product name will show no matter how the package is displayed on the shelf.
- Take the package out of the old medicine-bottle class and add as much design and color as necessary to create impulse sales.
- For bulky products, allow a little extra room in case the store clerk must open and show it to the customer and then repack it.
- Ship packages in units that facilitate reshipping by wholesalers.



STORY-TELLING carton stresses ease of painting with a roller. Contents are often shown for counter display.



CARDED PRODUCT, integrated with display-card drawing, shows quickly the purpose of Monowatt phone light.



An interesting example of how these principles are being put into effect is Sears, Roebuck & Co.'s packaging program for hardware. Sears' experience is worth study because it represents the viewpoint of both retailer and manufacturer.

The Sears story

There is a highly practical reason why packages in a Sears store must sell themselves. These stores do more than half their business in 12 hrs. of the week—on Saturdays and in the evenings. The customer's desire to buy quickly accentuates the necessity of a sharp, direct approach to packaging and labeling.

A package in a Sears store is designed to accomplish five things: protect, identify, inform, educate and sell. The informative angle is being given increasingly more emphasis. Sears puts so much information on packages and labels that the shopper, by himself, can find out practically everything he wants to know about a particular item. And for items that require clerk service, the salesperson finds on the packages and labels not only the correct data to help with the sale, but can actually become an expert on many technical aspects of complicated items.

The full effect of informative packaging was indicated by the company's barber kit sold in hardware departments. The original package looked like a small shoe box, but failed to dramatize the product. A colorful new combination folding carton and set-up box was adopted, including detailed instructions to show that hair cutting is easy with this kit. The whole story is told photographically on the package with appeal for both men and women. What had previously been a slow mover, immediately became a fast-selling item.

Wherever possible, Sears plans packaging to meet store-fixture requirements. Sears has an advantage in this respect, since the fixtures in its many stores are relatively uniform. Proper-sized packages in relation to these fixtures have saved much valuable display space. The aim is maximum merchandise in full view.

Current Sears packages for wood screws provide a good example of the procedure. Formerly, individual sizes and types of screws and bolts were packaged in gross lots. It was necessary to empty the contents into a bin from which the shopper or salesperson selected the desired quantity. This brought problems of marking, cleaning and mixing of sizes in the bins.

Now these items are packaged in small boxes with transparent plastic tops. On a well-planned, self-selection rack, it is possible to present an entire line of these small items in much less space and in a way that permits the shopper to help himself and re-

duces costly stock keeping. Sears reports sales were increased 300% after introduction of the new packaging and gross mark-up improved 5% the first year that this method was tried.

Carded items

The practice of mounting merchandise on cards offers the hardware manufacturer many opportunities for presenting products which might not otherwise reach desired counter-display positions. The Monowatt Div. of General Electric Co., which makes numerous electrical specialties, is a leader in the use of carded items.

There are several hundred items in this line, ranging from simple plugs and wiring devices to closet lights, night lights, etc., selling anywhere from a few cents to several dollars. Many items are small, irregular in shape and in some cases their use or purpose is not self-evident. The first requisite is to show the products so that the shopper can see them at the

Gift appeal



PRINTED FOIL in red and gold stripes is wrapped around the handles of six tools manufactured by Fayette R. Plumb to increase Christmas sales.



A SMART CARTON helps popularize Ecko kitchen-tool set.



SPECIAL DEALS have important place in hardware merchandising. Johnson's Pride and flannel dust cloth are placed together in open-faced carton overwrapped with cellophane.

point of sale. Seeing creates the desire to buy, but they must be demonstrated in a manner that illustrates how they are to be used. The carded display package offers the most economical way to permit this inspection.

The colorfully printed cards tell the product story quickly. Whenever possible, by the use of die cutting, stapling and properly prepared artwork, the carded packages are made actually to simulate the application of the product. A phone light appears on the card as though it is actually placed under a telephone. A night lamp looks as though it is actually hanging up on the card. The illusion creates a desire to buy.²

Growth of housewares

Some of the most advanced packaging shows up today in housewares since they have become such an important factor in hardware retailing and in the non-food departments of supermarkets.

In 1949 only about 7% of the nation's supermarkets stocked housewares on a regular basis and total annual volume ran approximately \$11,000,000. In 1953, 75% of the nation's supermarkets were reported to have stocked housewares on a regular basis, with a total annual volume of \$135,000,000.

Houseware manufacturers believe they are far ahead of many hardware manufacturers in the use of full-color labels to show, for instance, the kind

² See "Carding Techniques," MODERN PACKAGING, Aug., 1953, p. 104.

of appetizing food that can be prepared in a pot or a pan, or to illustrate the use of a drainboard or dish rack. Arthur Weiss, packaging chairman of the American Rack Merchandisers, who last year sold \$100,000,000 of the \$135,000,000 houseware volume, says:

"We still find many manufacturers who think that by taking a piece of paper, printing it with one color or by dropping an item in a bag or wrapping it in cellophane they have packaged for self service. Almost every national brand in housewares has realized the importance of packaging. The hardware manufacturer, however, has not done this. He expects us to buy his merchandise and display it in the same way that the hardware store has for many years."

In housewares, the picture package has a decided advantage. An impressive example is the pictorial printing on corrugated shipping containers for Will-o-the-Wisp's complete dinnerware service for four.³ Improved printing techniques permit halftone illustrations of typical items in the set even on the relatively coarse-grained surface of corrugated board. Manufacturers have been quick to adopt this idea to provide a plus advertising medium for the product from the time the carton leaves the factory until it is opened by the consumer.

Do-it-yourself trend

Story-telling picture packages have provided an excellent means for getting over the "do-it-yourself" appeal.

³ See "Printing on Corrugated," MODERN PACKAGING, Aug., 1953, p. 98.

Millions of persons who already have substituted the power mower for the gardener and the washing machine for the laundress are now making it a national sport to fill the shoes of the painter, the carpenter, the plumber and other craftsmen, thereby sparing themselves from inflated bills and having fun at the same time. This trend has created not only a whole new field for packaging hardware items in home-use units, but has demanded new design treatments to capitalize on this new buying habit.

Wooster Brush Co.'s folding carton for Fabric "X" all-purpose painting kits, including a brush roller for applying the paint and a feed pan, is an interesting example. The front of the carton for these brushes shows the illustration of an attractive young woman holding one of the brushes, accompanied by several slogans urging the shopper to "be a week-end painter" and "paint it yourself." Brush and pan can be placed in front of the carton to make an eye-catching, three-dimensional display effect.

H. O. Canfield Co., Bridgeport, Conn., is marketing a home plumbing kit in a package especially designed for appeal to women. A 16-page manual is included to tell how the items in the kit can be used for most home plumbing repairs. The parts are skillfully packed in an open-face set-up carton with transparent plastic top which shows the entire contents at a glance.

Point-of-sale aids

Perhaps in no other field is the point-of-sale fixture or counter dis-

Plastic containers show the



RE-USE POSSIBILITIES of polystyrene boxes for Vernon Chemical's electrical tape are many. These boxes protect while the tape is being used.

play more welcomed than in hardware retailing. The thousands of small items do not lend themselves to shelf arrangements like cans of soup or cartons of breakfast food.⁴

From the hardware retailer's point of view, the display fixture or merchandiser brings order, sometimes provides an entire department in itself, complete with self-selling information.

Display fixtures of the type supplied by the Stanley Works, New Britain, Conn., are extremely popular with hardware retailers because they save selling space and make self selection easy. One fixture containing 57 popular household hardware items is advertising as a complete hardware department in 2½ sq. ft. Five feet high and 2 ft. wide, it holds carded items. A variation of the same display measures 2 ft., 9 in. in height and 4 ft., 4 in. in length so that it may be used horizontally on store island and counter tops. Still a third type, measuring 15 in. wide, 15 in. high and 6 in. deep, is designed for use anywhere in the store—on an island, on a counter, on a wall or on a post.

Stanley points out that a fixture, exhibiting a complete assortment, promotes related-item buying all the way down the line. Cabinet hinges quickly suggest the need of a cabinet catch or vice versa. No opportunity to make an extra sale is missed.

The wire rack and the combination shipper-display carton are typical point-of-sale devices, familiar to most industries. But the hardware producer

⁴ See "Considerations of Shelf Display," MODERN PACKAGING, July, 1954, p. 87.

TWO compartments of polyethylene bag for Hager's hardware items assure special place for accompanying screws without loss. Card mounting facilitates handling and display of item.



has greater opportunity than those in many other fields to conjure up traffic-stopping gimmicks. An old showman trick is to give an actual demonstration of the product, preferably something that the shopper can do himself.

Phelon Magnagrip Co., East Longmeadow, Mass., has a product—a permanent magnetic holder for knives, tools and kitchen utensils. It is a natural for counter demonstrations. Although hundreds of thousands of Magnagrips have been sold, there are still millions of families not familiar with its uses. It is one of those hardware products which requires not only display but demonstration, as appearance alone gives little clue to its use.

The company supplies retailers with a display rack onto which a Magnagrip is screwed in place on the top. A spatula is chained directly below with the metal edge magnetically attached to the Magnagrip. Tests show that a large percentage of customers passing the display, can't resist stopping to see what's holding the spatula and they automatically demonstrate the product to themselves. An

open-top carton holding a dozen individually boxed Magnagrips must be placed in the bottom of the wire display stand to weight the unit down and make it completely stable. The company believes it's a short step between trying the product and taking one home.

Yale Lock Hardware Div. of the Yale & Towne Mfg. Co. appeals to the do-it-yourself market with a shipper-display carton for its Nightlatch.⁵ The cartons contain three acetate-window cartons, each of which has the complete lock assembly. On the riser is the suggestion, "Install it yourself—today," and the statement, "Clear, simple instructions with each package."

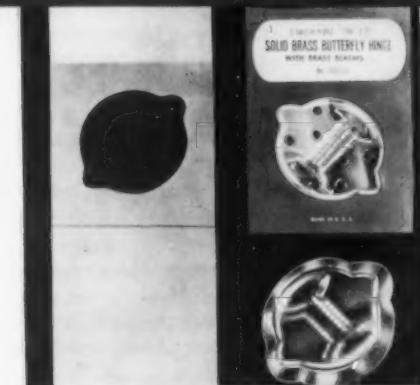
Plastic blisters

Other Yale point-of-sale merchandisers for locks illustrate the use of transparent blister packages⁶ and polyethylene bags mounted on display cards. Either method has the ad-

⁵ See "Self-Selling Hardware," MODERN PACKAGING, Feb., 1954, p. 105.

⁶ See MODERN PACKAGING, June, 1953, p. 132.

product and protect contents



TRANSPARENT BUBBLE is vacuum formed to shape of item and carded.



SLIDING TOP of clear acetate enables the shopper to inspect hardware items packaged by the National Lock Co.

vantage of clearly showing the merchandise on display, keeps the lock and key together and tends to discourage pilferage.

Novel is the package for the Yale Nugget, a small padlock, which is individually enclosed with its key in a formed transparent acetate bubble attached to a card. In a recent study of the latest developments in vacuum formed plastics,⁷ MODERN PACKAGING cited the case of the Master Rule Mfg. Co., Middletown, N. Y., which forms in-plant a sheathed jacket for a line of roll-out steel tape measuring rules and replacement blades. The technique of this company is to use the product itself as a mold, demonstrating a new application of the imbedment principle. The package is designed so that each rule is attractively displayed, protected, inspectable and accompanied by a complete sales message.

A low-cost, closely fitting plastic package such as this will undoubtedly carry favor in the hardware industry where so many products have irregular shapes. Its acceptance should be even quicker since the product itself serves as the mold and completely eliminates the die cost.

Rigid transparent plastic boxes which both show and protect the

⁷ See "Vacuum-Formed Plastics," MODERN PACKAGING, Feb., 1954, p. 108.

product until the time of use are now a familiar sight in the hardware store. Many products, formerly packaged in opaque boxes and hidden behind the counter, are now getting open display in a variety of plastic boxes. New transparent, high-impact polystyrene containers, designed to provide a jewel-box setting, have been adopted by Delta Power Tool Div. of Rockwell Mfg. Co., Pittsburgh, to increase the visual impact of the Delta-Rockwell 6-in. dado set and molding cutterhead set. They snap open and shut and can be used to store the sets indefinitely, having a practical re-use application in the home workshop.

A similar type of package for electrical tape is used by the Vernon Chemical & Mfg. Corp., Mt. Vernon, N. Y. A printed insert gives prominence to the company's Black Wizard brand name and other product information. The container protects the tape while it is in use and may be re-used for pins, clips, buttons, small jewelry and fish flies, lures and hooks.

The transparent and translucent films are also finding new applications in hardware packaging. Numerous products which were never packaged before are appearing in cellophane overwraps. In the case of heavy, rough-surfaced, irregularly shaped products, polyethylene bags with saddle labels are often the rule.

A very successful cellophane application is the automatic packaging of a picture hook with its nail in unit cellophane packets by the Moore Push-Pin Co., of Philadelphia.⁸

An application for Pliofilm shows a method of handling odd-shaped products by the use of a sleeve around the bristles of a household broom produced by the Zimmerman Brush Works, Inc., Chicago. The stretching qualities of the Pliofilm band causes it to stay in place, holding the bristles together tightly for a neat appearance. A red, white and blue design features the brand name prominently to tie in with company advertising and calls attention to the advantages of the broom. A large price spot, essential for quick-selection selling, allows for easy marking and speeds service at the check-out.

A functional variation of the unit packaging idea is being tried by C. Hager & Sons Hinge Mfg. Co., St. Louis, a large manufacturer of household hardware. This company has

adopted a two-compartment polyethylene bag, each section separated by a heat-sealed seam. One compartment is used to hold the screws and the other to hold a variety of hinges, braces, hasps, locks, catches and knobs. The bags are mounted on printed cardboard backs for display. A two-compartment bag like this could be adopted for selling other types of companion items in the same package or for increasing unit sales by encouraging multiple purchases.

Packaging lines

With the exception of parts packaging, not generally considered in the category of consumer items for the hardware retail field, mechanical methods of package production have been slow in the hardware industry because of the baffling variety of products handled, often in quantities of insufficient volume to make automatic operation feasible.

Nevertheless there are notable exceptions. The American Hardware Corp., New Britain, Conn., has mechanized its operations to the extent of installing machines which automatically set up cartons at a speed of up to 100 a minute and deliver them on a conveyor to an operator who applies an electrically dispensed label.⁹ The cartons are then loaded and manually closed.

The Moore Push-Pin Co. mechanically unit packages its picture hooks and the accompanying nails in the cellophane packets mentioned previously in this article. This represents a great saving in labor. Previously these hard-to-handle picture hooks and nails had to be inserted in cartons by hand. On a conventional type of machine which forms, fills and seals unit cellophane packs, the company now has an almost completely automatic operation. However, thousands of dollars were spent before the conventional equipment was successfully adapted for picture hooks. Moore had to solve the problem of feeding two small parts into the one cellophane pocket.

Hardware accessories for General Motors cars are packaged with ease on conventional equipment by the Ternstedt Division of the company in Trenton, N. J.¹⁰ Much larger than picture hooks, the parts are fed by (This article continued on page 232)

⁸ See "Thrifty Self-Seller," MODERN PACKAGING, Aug., 1954, p. 114.

⁹ See "In-Plant Labeling," MODERN PACKAGING, Dec., 1953, p. 132.

¹⁰ See "Unit Packaged for the Assembly Line," MODERN PACKAGING, June, 1953, p. 126.



TAPER FIT carton protects
Baker brushes and its flaps serve
as a vehicle for printed copy
on how to care for product.



NEWLY DESIGNED bottle has more impressive size and shape, bolder identity, better function and improved display boot with locking base to discourage pilferage. Back copy on boot explains the height of fill.



COUNTER DISPLAY for self service is designed to stop the shopper with bold, colorful, clean-cut impact.

Stopette meets the trends

The pioneer of all the squeeze bottles adopts improved designs and display methods in line with self-service needs

In the fast-moving cosmetics field, as in others involving consumer products sold in large volume, the price of leadership comes high. It involves, for example, constant alertness to new marketing trends and a willingness to modify even successful packages and displays when necessary to keep pace with competition.

Although it pioneered the polyethylene squeeze bottle and holds one of the top sales positions among all anti-perspirants,¹ Dr. Jules Montenier's Stopette container has undergone a series of design improvements since first appearing on the market in July, 1947, in Chicago. The purpose of these changes has always been to improve the function and convenience of the package and consumer acceptance of the product.

The latest Stopette packaging changes, developed under the direction of Dr. Montenier, involve an improved bottle design, a new anti-pilferage type of single-unit, self-display package for both the \$1.25 and 60-cent sizes of Stopette Spray Deodorant and a versatile two-level, self-service, counter-display unit which will hold 30 of the 1-oz. bottles or 16 of the 2½-oz. size.

The modified Stopette bottle fea-

tures a classical rather than the former oval shape, characterized by a broader and higher "shoulder line." Pure white rather than natural polyethylene enhances its beauty and cosmetic appeal. The container is proportionately wider and flatter than the earlier version, making a much more impressive display on the retail store counter despite the fact that both bottles carry equal amounts of Stopette. An indented panel in the front of the bottle improves its dispensing action and provides a non-skid grip for the thumb, while adding an attractive design detail. The increased width of the new bottle makes it possible to incorporate the product name in much larger and more legible script. It now appears in relief on both front and back. Stippled shoulders have been eliminated, while the polystyrene spray valve and white urea closure remain unchanged.

The greatly improved individual bottle display package embodies a new-type interlocking base construction, including a die-cut slot and flap, which grips the foot of the container, effectively thwarting pilferage. Printed in gray, red and white on folding boxboard, the unit highlights the product name across the top, against a simulated spray much broader and more forceful than that used on the pre-

vious package. Elimination of the feminine illustration used on the former bottle card focuses greater attention on the product itself, which has a growing male market. A circular price spot on the base facilitates pricing, while on the back the package carries detailed use instructions and a diagram calling attention to liquid level and air space required for spray action.

The new multiple-unit, self-service, counter display, having a dark blue background and bright red shelves, is dominated by the product name across the top in large white script letters. Copy points up the familiar Stopette slogan, "Poof! There goes perspiration!" and the product's new anti-immunity factor. The width of the shelves is such that they will accommodate either four of the \$1.25-size bottles, two units deep, or five of the 60-cent size. The new counter display is being introduced to the trade during August and September in connection with a new "deal" including 23 bottles of Stopette.

CREDITS: Polyethylene squeeze bottles molded by Plax Corp., Hartford, Conn. Polystyrene spray valves and urea closures by Formold Plastics, Inc., 11955 S. Vincennes, Blue Island, Ill. Individual and multiple-bottle display units by Green Bay Box Co., Green Bay, Wis.

¹ See MODERN PACKAGING, Packaging's Hall of Fame, April, 1953, p. 136.

Design



Grass seed packs need not be green

The idea that lawn-seed cartons must be green is challenged by the excellent sales results reported by Geo. A. Davis Co. with its new "Aloha" group of lawn-seed packages, which utilize the same basic family design but are printed in a variety of background colors. This departure from customary seed packaging was developed when dealers found that clerks often inadvertently interchange seeds of different quality and price. The colors facilitate recognition of the seed varieties. Data on composition, germination, etc., are added in a blank area by an addressograph process. Letterpress printed, the cartons use two colors plus black, with only the background color varied except for name slugs in black. The multicolor group of packages is produced by a simple wash-up and ink change-over of the cylinder running the background color.

CREDIT: Cartons by Ace Carton Corp., Chicago.

Two plastic materials give glamour to vitamins



A far cry from the standard conception of a "pill box" is this handsome re-use molded plastic container for Chicago Pharmacal Co.'s "Gems of Vitality" Renuvo B-complex vitamin capsules. The package demonstrates that even pharmaceutical products can be dramatically packaged. Measuring approximately 4 $\frac{1}{2}$ by 3 $\frac{1}{2}$ by 1 in., the stock container is molded of clear transparent polystyrene with a hinged cover and locking catch. A decalcomania of the company's crest applied to the cover provides manufacturer identity without detracting from the dignified appearance of the package. In the box, the red oval capsules, which lend additional eye appeal to the product, are held in six form-fitting grooves cut in a solid block of polystyrene foam, tightly overwrapped with saran film for maximum cleanliness and moisture protection. A printed label is placed in the bottom of the box.

CREDITS: Polystyrene container by Bradley Industries, Chicago. Styrofoam partitions by Glo-Brite Products, Chicago. Decalcomania by Meyercord Co., Chicago.

Histories

Low-cost kit for artificial flowers

Success of Jack de Jong & Co.'s new "Easy-to-Make Flowers" has been attributed to the packaging of these sets, which contain all the materials for making artificial flowers. The die-cut and scored container is an excellent example of packaging created for self-service merchandising of an inexpensive "do-it-yourself" item. There are six packages for six different flowers, each with a full-color reproduction of the particular flower to be made on the front panel. The colored crepe paper enclosed shows through a die-cut opening in the carton. As pointed out on the face of the package, each step to be followed in making the flowers is "amazingly simplified by clear picture directions" inside the package. All of the "makings" for the flowers are stapled to an inner platform.

CREDITS: Design by Marjorie M. de Jong, New York. Package by A. Fleisig Sons Folding & Setup Paper Box Co., New York.



Smart design gets small tools in preferred positions

The trend to self-service, impulse buying in the hardware field and the growing do-it-yourself market (see "Hardware," p. 108, this issue) prompted a package redesign for the entire line of Red Devil small tools. When these colorful new packages reached the dealers, it is reported, they were given preferential shelf and counter space. Stronger appeal is provided for these products without losing any of their long-established brand identity. The old trademark has been subtly modernized. Trademark and illustrations of the company's many products are utilized as a smart repeat pattern to identify and sell the entire line. Typical of the modernized packaging is the individual pack for glass cutters. A new look of quality is achieved with the cellophane-wrapped tray.

CREDITS: Design by Gerald Stahl, New York. Metal edge boxes by National Metal Edge Box Co., Philadelphia. Display cartons and trays by International Folding Paper Box Co., North Bergen, N. J. Cellophane wraps by Shellmar-Betner Div., Continental Can Co., Mt. Vernon, Ohio.



Built like a bee-hive

Cone-shaped paperboard construction provides base for winding rubber stripping and offers appeal as well as convenience

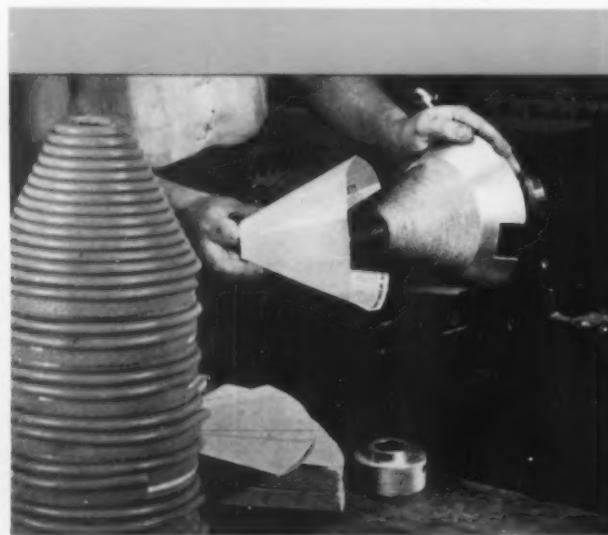


PAPERBOARD CONE, scored and glued, provides the base for an unusual new display package for weather stripping. Complete directions for use printed on the cone are visible when the package is inverted.

A new kind of scored paperboard cone-shaped package devised for flexible weather stripping and adopted by Bridgeport Fabrics, Inc., Bridgeport, Conn., suggests a clever new way to handle strip materials sold in lengths. This packaging idea might well be applied to a number of products in similar categories in need of convenient display sales units to get them out of the back room and out front in the hardware store.

The new packages, which were a special development of the company's box supplier, look so much like beehives that the company calls them the "Queen B Pak" and the "B Pak." Each consists of a flat, die-cut piece of paperboard which, when prepared with 12 vertical score lines and glued, forms a 12-sided, cone-shaped figure, similar to the cones used for cord or twine. The rubber "Inner-Seal" weather stripping is simply wound around the cone and held in place at the bottom by two wire staples. The weather stripping is further secured to the cone by means of a die-cut paperboard band which is slipped through the open ends and stapled at the top.

The paperboard band is printed to carry trade identity and all informative and promotional material about the product. Complete directions for applying the weather stripping are presented in printed copy and how-to-do line drawings on the inside of the cone are clearly visible when



PRE-GLUED BLANKS are placed on revolving mandrel.



WEATHER STRIPPING is wound from top over cone.

New package requires

the cone-shaped package is inverted.

The packages offer convenience all along the line. They mean new economies in handling to the manufacturer. For the first time they provide individual package units for products which heretofore were supplied on 500- or 200-ft. reels from which retailers had to measure off desired lengths to serve their customers. To the consumer they offer in an easy-to-handle put-up just the right amount of stripping for a specific purpose. The do-it-yourself home owner doesn't have to bother with a tangle of footage to measure off required lengths. He merely picks up a separate pack for each purpose. The new packages are described in Bridgeport Fabric's promotional material to the trade as follows: "Now! Inner-Seal, the top quality weather stripping, comes packaged in the exact lengths customers need—ready to give you fast, profitable turnover." There are two similar packs of different sizes—one containing a 17-ft. length (enough for a window, storm window or top and sides of a door) priced at \$1.98; the other, a 10-ft. length, enough for top and latch side of any door, priced at \$1.19.

The Queen B and the B Paks save clerks' time and can be arranged easily for self selection. There is no need to explain to customers how to weather strip, as complete instructions are printed inside every pack. The packages speed the sale as no



SQUARE CARTON is used for company's garage cushioning, not applicable to cone-shaped package. Window cartons permit the product to be viewed, discouraging consumers from opening package to see contents.

time is required to cut the stripping to lengths; the consumer merely picks up a package designed to meet all average requirements.

The bee-hive packages, because they are hollow, may be stacked one on top of the other, conserving shipping space and offering excellent mass display in very small space. Printed in yellow and black with reverse white for trade and product name and the background of the

price spot, the packages make a colorful array in display and attract attention also because of their unusual shape.

A special production set-up had to be devised for handling the package and, while much of it is a hand operation at present, the company is studying methods for mechanizing the line in so far as feasible. The cones are shipped flat, but pre-glued, (This article continued on page 227)

special production technique



LOCKING COVER is removed from mandrel.



STRIP END is stapled to cone.



PRINTED BAND stapled through cone gives trade and product identity. Note compact form for stacking.

Paper-sling pallet

It's only a single sheet of kraft and two paperboard tubes,
but it carries ton weights of bagged chemicals

Palletizing of packaged products, which has been growing steadily lighter and simpler since the first wooden pallets were introduced by the Navy some 10 years ago, makes a new record in these respects in a disposable pallet which is nothing more than a sheet of paper and two spiral-wound chipboard tubes, developed and now in use by American Cyanamid Co. and called "Accopak."

This new type of pallet, which weighs less than 3 lbs., supports a load of nearly a ton. American Cyanamid is using the method in shipping its

Aero phthalic anhydride, a plasticizing agent. The product is packaged in 80-lb. bags; 24 bags are stacked on a pallet—a total load of 1,920 lbs. The pallets are believed to be adaptable to cartoned goods, although they have been used thus far only on bags. The stacking pattern used, as shown in the accompanying illustrations, has proved to be the most successful for phthalic anhydride; for other materials, different stack patterns may be desirable.

The paper sheet, which serves as a sling for the load, is a 90-lb. basis

weight kraft paper containing melamine resin* for special wet and dry strength. Tensile strength is reported to be exceptionally high. Two ends of the sheet are folded back and bonded with a wide strip of glue, leaving a sufficiently wide opening at each end for insertion of the chipboard tubes. Strain on the pallet is relieved by stacking patterns which distribute the over-all weight. New-type bayonet forks, readily attachable to any present type of fork-lift truck, slip into the tubes for lifting the palletized

* American Cyanamid Co.'s Melostrength.



NEW 3-LB. PALLET supports load of nearly a ton in sling-type fashion. Lift truck is shown elevating twenty-four 80-lb. bags of chemical at Bridgeville, Pa., plant of American Cyanamid Co.

load. Loads can be lifted, carried and stacked in single-, double- or triple-decked tiers without removal of the pallet during storage or shipment.

Extensive tests indicate that this method of palletization offers a number of important time- and money-saving advantages in shipping, warehousing and handling. One important advantage is in connection with loading and unloading of freight cars and motor trucks. An entire load can be shipped double deck and completely palletized without the use of wooden pallets and can be unloaded and warehoused completely palletized.

Tests have indicated a saving of from eight to 10 man hours in unloading a completely palletized shipment in comparison with handling by non-unitized methods. One man with a fork-lift truck—and without the aid of a helper—can unload and stack the shipment in a warehouse in approximately one-fifth of the time previously required with non-unitized bagging, it is reported. Since the bags are shipped completely palletized, they arrive in compact shape, stack neatly and occupy less space.

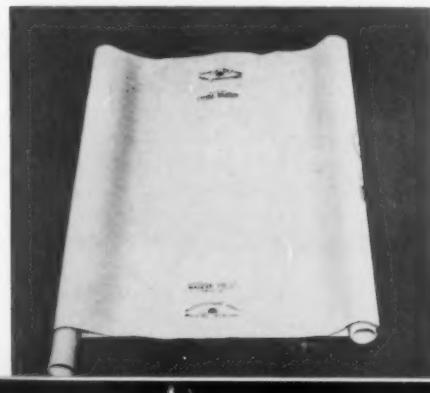
In warehouse storage, special stacking on wooden pallets is not necessary with these new pallets as it is with paperboard-type bases. The load can be stacked in multiple-deck fashion without removal of the pallet, at the same time permitting easy recovery at any time.

These pallets can be easily stored and assembled. They may be rolled up like a map or stored flat, with the tubes tied in a convenient-sized bundle. The pallet can be assembled in a few seconds simply by inserting the tubes in the ends of the sling. They occupy a minimum of space with a maximum of convenience.

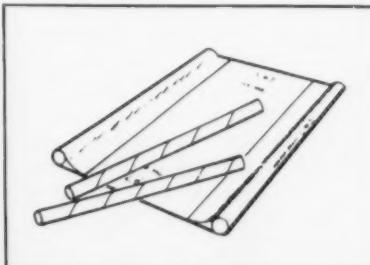
The special bayonet-type forks, de-

SIMPLICITY

of pallet is revealed in this close-up. It is assembled in only a few seconds by inserting paperboard tube in each end of the kraft paper sling.



COMPONENTS—two durable paperboard tubes and strong paper sling. The sling is a 90-lb. basis kraft sheet containing melamine resin.



SEPTEMBER 1954



MULTIPLE-DECK STACKING in tiers is possible without removal of pallet during storage or shipment. Easy recovery can be made at any time by inserting special bayonet-type forks of lift truck into the paperboard tubes at the two ends of the sling pallet.

signed also by American Cyanamid, can be purchased for any type of fork-lift truck. Change-over between the bayonet-type and the chisel-type forks, it is said, can be accomplished in a matter of minutes. As a matter of fact, the bayonet-type forks can be used to handle wooden pallets.

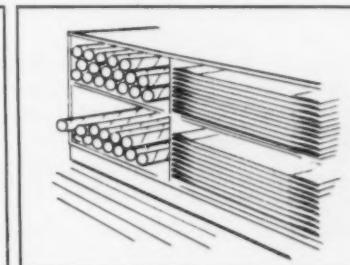
According to American Cyanamid, these new pallets should cost substantially less than the expendable paperboard-base type of pallet and a fraction of the cost of wooden pallets.

Commercial development of this

new method of palleting was worked out at the Bridgeville, Pa., plant of American Cyanamid. Here, representatives of the company's Plastics and Resins Division collaborated with engineers of the Chemical Construction Corp., Cyanamid's subsidiary which invented the pallet, in testing new bagging processes and adapting the system to commercial application.

The new pallet is being patented by American Cyanamid, which will offer manufacturing licenses to companies in the paper industry.

STORAGE requires minimum of space. Paper slings may be laid flat or rolled up like a map. Tubes are tied together in bundles.



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The Kellogg Co. is currently demonstrating what is probably the ultimate in its objective of "magazine-cover design technique"—a term Kellogg originated two years ago to describe a new principle in package format that achieves maximum brand and product identity in view of the constantly changing promotional appeals that have become such common practice in the cereal industry.¹

Nothing could look more like magazine covers than Kellogg's Corn Flakes packages currently featuring Norman Rockwell paintings of four Kellogg kids.

The drawings, by the *Saturday Evening Post*'s famous cover illustrator, are the subject of a nationwide contest tying in with a series of *Life* magazine advertisements in which the four kids—named Pigtails, Freckles, Beanie and Sis—are the chief attractions. Contestants are asked to select one of the Kellogg kids with the most appeal and tell why. Each entry, of course, must be accompanied by a box top from a Kellogg's Corn Flakes package.

Use of the drawings is one more striking example of the flexibility of Kellogg's package design—a principle in technique that manufacturers in other fields will find increasingly useful for handling the growing number of contests and premiums that are sweeping the food field. Almost the entire face of a Corn Flakes package can be devoted to a special promotion without in any way affecting the basic upper-left-hand corner of the front panel, which, like the masthead of a magazine, always remains the same.

The Rockwell vignettes dominate the entire front panel, but right there as bold as ever, where it can't be missed, is the familiar red and green lettering that says "Kellogg's Corn Flakes." The only other copy is the famous slogan, "The Original Kellogg," and weight information.

All contest data about the \$5,000 cash prizes are printed on one side panel. The back of the packages is being devoted to Kellogg's current cooperative program with Kraft Caramels and recipe data for making Caramel Corn Flake crunch—a home kitchen confection requiring the products of both companies.

The whole project is in keeping with the company's aim to offer on a

¹ See "Magazine-Cover Cartons," MODERN PACKAGING, April, 1952, p. 86.

KELLOGG'S



CONTESTANTS are asked to select one of these four Rockwell kids now appearing on Corn Flakes cartons with most appeal and tell why.

cereal package something that's newsy and of interest to the whole family.

The Norman Rockwell drawings were selected, according to the company, because "we wanted to devise a theme that would appeal to adults as well as children and Rockwell had that kind of universal appeal."

The drawings are being reproduced on all sizes of Kellogg Corn Flakes cartons—8- and 12-oz. as well as the big economy 18-oz. king size, popular in rural areas. The contest packages have been in the making for more than a year. Like most Rockwell subjects, the four children were drawn from real life in the little town of

Arlington, Vt., where the artist lives.

The best engraving skill was required to adapt the drawings for realistic reproduction by 75-screen plates on the surface of cereal carton board, in comparison with the 120-screen ordinarily used for such color subjects on coated magazine stock.

The packages went on the market in mid-June when the first *Life* advertisement appeared featuring a Rockwell illustration.

Each of the four portraits on the packages is being used as the subject for the series of ads on the promotion, accompanied with an illustration of the package and a blurb about the

Norman Rockwells

Cereal company's magazine-cover carton technique offers a perfect vehicle for contest built around famous illustrator's drawings

contest—making a strong point-of-sale tie up with the package.

Copy quoted from the first ad in the series shows how Kellogg is using this contemporary Americana:

"Little pink and white girls like this one, painted for us by Norman Rockwell, are one of the endearing things about this world. And in their way, the Kellogg's Corn Flakes this little miss is eating are very nice too. A lot of people have always thought so, all kinds of people. No other cereal has ever matched the American taste in the same way . . ."

The selling line is at the end: "If somebody at your house got up tomorrow morning with his mind on Kellogg's Corn Flakes, would you be ready for him? How are you fixed?"

The announced aims of Kellogg's

packaging program, when the redesign job was announced in 1952, were:

1. To speed the movement of cereals through the store by making the shelf space a grocer gives to Kellogg's cereals work harder for him.

2. To achieve a package modernization and design that is directly related to the display needs of the modern supermarket.

That these aims are being constantly achieved is indicated by the many successful food-illustration appeals, radio and TV tie-ins, recipes, games, cut-outs, etc., that Kellogg has been able to feature on its packages.

The packages were even devoted to public service during the 1952 Presidential campaign, when Kellogg printed the pictures of the two leading candidates on breakfast-food cartons in an effort to get out the vote.

Does Kellogg's kind of packaging pay? According to all available market studies, Kellogg's Corn Flakes continue to be the number one seller in the ready-to-eat cereal field, a position they have held every year since the product was first introduced commercially in 1906.²

² See *Packaging's Hall of Fame*, "Kellogg's Corn Flakes," *MODERN PACKAGING*, Feb., 1952, p. 92.

NEWSY APPEAL makes packages work hard for grocer in mass display. The lovable kids were chosen for their irresistible appeal to grown-ups as well as to children.



SIDE PANEL carries contest data. Backs of packages are devoted to cooperative effort with Kraft Caramels. The consumer must buy both corn flakes and caramels to make the corn-flake crunch recipe. Other side panel calls attention to the waxed inner bag that assures product freshness.



CENTURY-PAK is Lederle's name for a bulk pack in which pills and capsules are pre-counted in units of 100 in individual polyethylene bags and then packed in fibre drums as usual. Bags offer moisture protection and save druggist's time in counting pills when he is busy filling prescriptions.

TABLET FILLING machine designed in Lederle's own shop fills bottles with 100 tablets at a time. At worktable, women place bags over bottles, invert bottles to fill bags. Filled bags are placed on trays prior to sealing.



The old bulk canister from which the druggist counts out capsules and tablets one by one and places them in bottles to fill prescriptions is being thrust into limbo by Lederle Laboratories, Division of American Cyanamid Co., Pearl River, N.Y., which is now bagging counts of 100 in polyethylene film and placing either 50 or 250 bags in a canister.

Called the "Century-pak," the new packaging arrangement is primarily intended to save the druggist's time in ladling out the correct count for an order. Beyond this consideration, the moistureproof polyethylene bags prevent moisture damage and help guard the delicate products against breakage, dust and malformation.

So far the packaging innovation is being used on about 14 Lederle prod-

ucts. The idea is said to have had a favorable effect on sales, although no specific figures are given. Druggists have naturally been enthusiastic about the convenience feature of the pre-counted pack. They are also more certain of receiving the contents of the canister in perfect condition.

All of the space in the bulk canister is effectively used, since the bags in themselves are so flexible that they take up little room. There can be no loss due to spillage, often the case in bulk containers, since the capsules or tablets are sealed in polyethylene bags. Should a bag spill out, it can naturally be replaced without any damage or contamination.

Drying, cracking and breakage due to excessive moisture have been almost entirely eliminated, thanks to the

protective qualities of the polyethylene film. Sticking of capsules to the bottom of the container, or of one to another, is also a thing of the past for the same reason.

The sealed bag represents the utmost in sanitation, since dust and dirt are kept completely out. The bags also make it a simple matter for the druggist to dump the required count into a bottle for his customers. It should be mentioned too that a simple counting of the bulk bags gives a ready guide to inventory.

Century-paks do demand a completely different system of handling than that used on the bulk canister filling. Utilizing existing equipment, Lederle has worked out a highly efficient system, even though some manual operation is involved.

PRE-COUNTED PILLS

Lederle makes it easy for prescription druggist by packing pills and capsules in polyethylene bags by the 100s

Two sizes of pre-fabricated polyethylene bags, 4 by 6 in. and 4 by 4 in., are used, the size being determined by the size of the tablet or capsule. The larger of the two handles most sizes. The bags are printed in Lederle's own plant so that inventory can be kept low in bag stocks. The laboratory batch number is also imprinted on the bag to insure proper product controls.

Capsules and tablets are first put through Lederle's self-designed filler which counts out 100 and fills them into standard glass bottles. Two women operators usually handle this part of the line. The filled bottles are moved to a table where it is a quick hand operation to place the polyethylene bags over the bottles and invert the bottle to fill the bag. The bags are loaded on trays prior to entering a band-type heat sealer.

Two operators, one on either side of the heat sealer, take bags from trays, shake them to allow sealing clearance on top of the bag and start them through the sealer. Sealed tight, the bags are dropped on a conveyor belt which carries them to a packing table. Here one operator takes the bags off the line and compresses them for easier stacking, while another packs them in the canister and places one cushioned paper disk on the bottom, one between each two layers of bags and one on top. No other shipping container is needed.

CREDITS: "VisQueen C" polyethylene film by The Visking Corp., 6733 W. 65 St., Chicago 38. Bags fabricated by Kennedy Car Liner & Bag Co., Shelbyville, Ind. Heat sealer by Doughboy Industries, Inc., New Richmond, Wis. Canisters by Continental Can Co., Inc., Fibre Drum Div., 100 E. 42 St., New York.



TWO SIZES of polyethylene bags, 4 by 4 in. and 4 by 6 in., are sufficient for a variety of pills and capsules. Bags are printed in Lederle's own shop so inventory may be kept low.



BAGS NEST easily in canisters. First operator compresses bags; the second loads them into a canister, inserts cushioned disk on the top and tape seals the top.

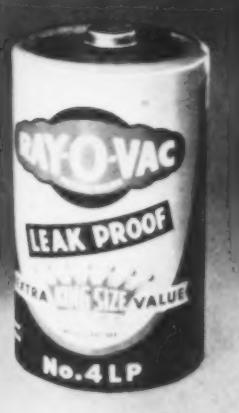


PACKAGING

1



2



3



4



1

A sturdy, self-opening-style paper bag with reinforced built-in handle provides a non-messy, easy, carrying container for the Connecticut Coal & Charcoal Co.'s Pik-Nik-Pak Charcoal. The handle folds flat for easy stacking and the bag retains its square shape at all times. The bag is securely closed by stapling or sewing beneath the handle area. Bag, Equitable Paper Bag Co., Inc., Long Island City, N. Y.

2

Ray-O-Vac Co.'s new Leak Proof brand "King Size" flashlight battery features a special polyethylene liner between the zinc can and outer steel shell. The liner is much thinner yet more durable and chemically resistant than standard insulating materials and is designed to give superior protection and longer life. Polyethylene liner, Thilmany Pulp & Paper Co., Kaukauna, Wis. Container, J. L. Clark Mfg. Co., Rockford, Ill.

3

Unusual carton construction for the combination offer is a corner-window cut-out arrangement to hold a small flacon of Sortileg perfume along with a 1-oz. bottle of Sortileg toilet water—a Cigogne promotion. The perfume, on full display, is securely held in place and the package is reported to be no more costly than the carton which formerly held only the toilet water. Carton, The Lord Baltimore Press, Inc., Baltimore, Md.

4

Opalescent green color of this new foil carton for tubes of Procter & Gamble Co.'s Prell shampoo is similar to the color of the product. The carton is gravure printed in five colors with silver foil shining through the transparent inks. Gloss overprinting protects against scuffing in handling and use. The carton comes in four sizes, to hold 5-, 3-, 1.7- and $\frac{3}{4}$ -oz. tubes. Design, Donald Deskey Associates, New York. "Foiline" carton, Robert Gair Co., Inc., New York.

5

The colors used in printing corrugated containers for the 1954 line of Reo Motors, Inc., power lawn mowers are different for each model. This procedure makes recognition of the proper parts easy and facilitates warehousing, shipment and assembly of the mowers. Pre-assembled, die-cut, glued inner protective pads, made in lefts and rights, are reinforced with rolled corrugated logs

5



PAGEANT

at the hand holes and where the mower is held. Container, Ottawa River Paper Co., Toledo, Ohio.

6 A 1-pt. refillable polyethylene bottle for U. S. Plywood Corp.'s Weldwood Presto-Set Glue has an applicator closure that eliminates need for a brush. The tip of the pointed closure is snipped off for controlled application; the screw closure is opened for refilling. Silk screening is in two colors. Bottles supplied and printed by W. Braun Co., Chicago.

7 Blue color of this gracefully designed, cosmetic-type, glass aerosol spray container matches the well-known blue glass so long associated with Bourjois' Evening in Paris products. Bourjois is using the aerosol for export as well as testing it for domestic markets. Bottle, Maryland Glass Corp., Baltimore, Md. Pressure cap, Risdon Mfg. Co., Naugatuck, Conn. Foil label, Foxon Co., Providence, R. I.

8 Any of Park & Tilford's four domestic whiskeys can be gift packed in this novel carton, printed with a background of golden-oak woodgrain. The rough-cut window permits full visibility of the bottle labels. Stencil-style lettering simulates stenciling on whiskey kegs. Design, Nesbitt Associates, New York. Carton, F. N. Burt Co., Inc., Buffalo, N. Y.

9 Minute Maid Corp. recently completed successful multiple-unit sales tests with this new patented paperboard tray for a deal offer of four cans of frozen concentrates—"Buy 3—Get 1 Free!" The carton trays, which use no glue, are shipped flat and formed on a special machine at speeds reported up to 90 per minute. The trays fit easily into the ice-cube compartment of the home refrigerator. Without overwrap, the cans are said to stay firmly in position even when the tray is held upside down. "Rigid-Pak" tray, Alford Cartons, Ridgefield Park, N. J.

10 A molded polystyrene re-usable basket with printed cellophane wrapper for Roseport brand quick-frozen, pre-cooked, breaded Chik-N-Basket, product of Frozen Farm Products, Inc., is reported to have met with excellent sales success both as a short-order item in restaurants and as a "take-home" Polystyrene basket, Gilbert Plastics, Inc., Hillside, N. J.

10



6



8



9



Accent

ACCENT ON THE ACCENT is feature of new design intended to get the product out of the store's spice department into faster-selling areas. New packages, in powerful red and white colors, include (from left) 1-, 4- and 8-oz. plastic-top fibre shakers; 1-lb. kitchen can with removable lid (in foreground, with leaflet) and inner pour spout; the 10-lb. institutional size in round metal canister and the 1-lb. institutional square can. At right, the old label is illustrated, for contrast, on 1-lb. square can. This can is still used in the company's "deal" carton with glass shaker.

With its own new streamlined packaging plant, embodying the latest ideas in layout and equipment, and a revised package design keyed more closely to operation of high-volume retail food outlets, Accent—the "third shaker" seasoning that has joined salt and pepper in many kitchens and dining rooms—is out to eclipse its former sales records.

Accent is the trade name for monosodium glutamate (MSG), as produced by Amino Products Div., International Minerals & Chemicals Corp., for sale through retail outlets and to the institutional trade. Since Accent made its consumer-market debut in 1948, the first product of its type made available directly to the housewife for home use, the actual packaging had until recently been performed by an outside food manufacturer having the necessary filling machines and related equipment. Within the last few weeks, however, Accent has established its own thoroughly modern packaging plant in Chicago, making it possible to centralize all of the company's packaging operations under its own direct supervision.

Packages now pouring off the lines of this new showplace plant in ever-increasing volume are not only different in construction from most of the

early Accent containers,¹ but also carry a sparkling new logotype, color combination and design treatment which give them much greater recognition value and sales appeal in the retail outlet. In its entirety, the Accent packaging program provides an excellent example of how merchandising experience may be enlisted as a guide to improve design and how the use of modern equipment and layout may be adapted to the handling of a variety of packages on an efficient basis.

Accent's new packaging plant is still growing and will ultimately house several independent lines for high-speed handling of the various package sizes produced. At the time this article was being prepared, the first complete line had been installed and was being utilized for packing the 1-oz. introductory-sized containers.

An outstanding feature of the new plant, completely air-conditioned, is that the packaging department has been enclosed within large plate-glass observation windows, so that visitors may be shown through the area without disturbing the flow of operations. It is also likely that a small test kitchen will be installed in which "taste

tests" of food products with and without Accent may be conducted.

Production methods

Bulk shipments of Accent arrive by truck from the company's production plant in San Jose, Calif., in 200-lb. drums. Opened drums are automatically up-ended on a hoist arrangement and emptied into a hopper, where the white, granular product is picked up by bucket conveyors and carried to the filling machine.

Arriving from the supplier's plant with plastic dispenser disks closed and acetate covers in place, the fibre canisters are placed in inverted position on an unscrambler table which feeds them via conveyor through an opening in the wall and into the packaging area. Before reaching the filling machine, they pass beneath a vacuum-cleaning unit of a type customarily used for glass containers, which automatically withdraws any dust or foreign matter that may be present. Moving single file, they are then spaced out at proper intervals for the in-feed filler cam by means of a rotating horizontal bar having spiral flights, after which they pass through the vacuum-filling unit and are filled automatically at a speed of approximately 100 packages per minute.

¹ See "Accent on Sales," MODERN PACKAGING, July, 1950, p. 108.

The 'third shaker' seasoning has an ultra-modern
packaging plant and a family of powerful
packaging designed to keep it running

on production

An unusual feature at this point is the automatic check-weighing and reclaiming machine. Packages move via conveyor through an automatic weighing mechanism which automatically rejects and dumps off-weight canisters, permitting only those falling within the weight tolerances to pass through. This machine, which operates at the same rate as the rest of the line, can be set to segregate separately the over-filled and under-filled packages, if desired. Rejected packages

are automatically inverted and contents funneled into a closed container, while the empty containers pass down another chute into a hopper, where they can be reclaimed and put back through the filling machine.

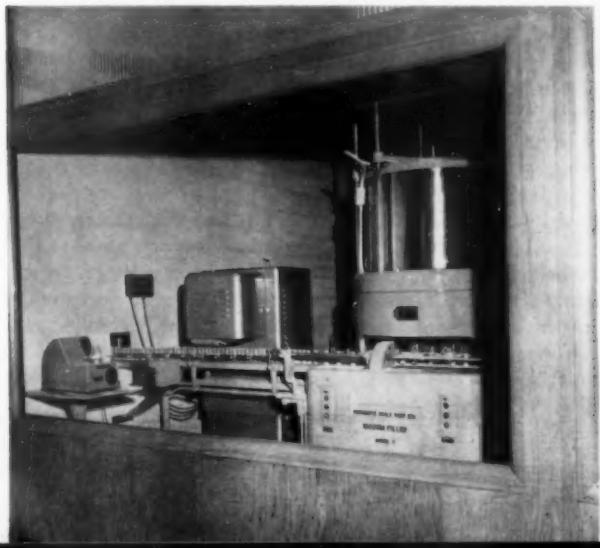
Accepted filled packages pass to the rotary seamer, where the metal bottoms are applied and continue to the end of the packaging department, where they transfer automatically to the packing tables.

Since the small size of the 1-oz. con-

ainers affords little space for detailed use instructions, this information is contained on a printed sheet which folds to slightly over 1 in. wide, but measures 10½ by 2½ in. in size when opened out. Before the containers are packed in the counter cartons, which are perforated so they may be hung on the wall if desired, one of the printed folders is attached to the back of each package manually with a strip of pressure-sensitive cellulose tape. To avoid defacing the printing of the

Packaging in new plant is a showcase operation

VISITORS ARE WELCOME to watch ultra-modern filling and sealing operation through plate-glass windows. Here 1-oz. canisters enter on left from unscrambler, are vacuum cleaned by the square machine at left center and are filled in a high-speed rotary vacuum filling machine.



AROUND THE CORNER, filled packages move through this highly developed automatic check weigher equipped with an electronic brain which shunts off under and over weights, dumps the contents in a jug on the floor and chutes emptied cans to hopper at right for re-use.





CONTAINERS ARE CLOSED by crimping on the metal bottom. They have been filled through the bottom. Filled containers continue on to end of packaging department, where they transfer automatically to packing tables.



FINAL OPERATIONS require hand work of taping instruction folder to side of each canister and packing in counter display cartons. Beyond this point, in warehouse area, cartons are packed in pairs in corrugated cases closed by stapling.

container when the folder is torn off, a special low-tack type of tape is used which holds the leaflet firmly enough, yet strips off easily.

After being filled and closed by operators at the packing table, the display cartons move via conveyors through a wall opening into the warehouse area, where they are placed in pairs in the corrugated shippers. Shippers are closed by means of a semi-automatic stapling machine, eliminating the use of gummed tape which formerly covered some of the labeling information on the shipping boxes. The packing of the "Third Shaker" sets and the special 1-cent deal sets, described below, is also handled manually in the same section of the packaging department, with cellophane overwrapping of the former units performed on a semi-automatic machine in the warehouse area.

Merchandising problems

Although the efficient new packaging plant marks an important milestone in the colorful history of Accent, it is by no means the full story. Behind the new packages themselves lies a comprehensive program of study and redesign which proves once again that packaging is a dynamic force which must never be taken for granted—that even when an effective packaging job has been done at the outset, alert manufacturers cannot afford ever to assume that their packages are above further improvement.

New merchandising goals set by a

manufacturer may create the necessity for a fresh packaging approach. In other instances sales experience with a product may point the way to further packaging improvements which will lay the groundwork for increased volume. How problems were uncovered and solved in connection with Accent, under the direction of a design organization retained to handle the over-all redesign program, is pointed out in the paragraphs that follow.

When Accent first appeared on the consumer market in 1948, the company recognized that the packages would have to do much of the necessary selling and consumer-education job. Prior to that time, MSG had been familiar, with rare exceptions, only to chefs and food manufacturers, who had long been aware of its peculiar ability to enhance natural food flavors without adding any flavor of its own. Accordingly, an attractive group of packages was designed, including 1-oz. shaker-top cans and 4-oz. glass jars and refill canisters, as well as $\frac{1}{2}$ -lb. economy refill cans. Utilizing a red-and-silver color combination, the early metal canisters were effective in introducing the product at the retail level. The glass jars, with their bright red plastic top, marked International's initial effort to add "the third shaker" to the average household. From the beginning, the company made use of small printed folders or booklets to provide detailed information concerning the product and its uses.

Accent's new retail distribution pro-

gram steadily boosted total sales of the product. Volume rose from 750,000 lbs. in 1943-44 to nearly 8 million lbs. in 1953. During that period Accent far outstripped all competitive MSG products and achieved distribution in about 75% of the nation's grocery outlets. However, management's ultimate goal, as established by J. R. T. Bishop, vice president, was to broaden the product's distribution into high-volume supermarket outlets, rather than limiting it to the relatively low-volume specialty groceries. It was also desired to free the product from the confines of the spice department and win for it additional store locations with greater volume potential.

Design studies

Preliminary package and market studies indicated that in several respects the original packages did not fully meet the demands of mass marketing. For example, the square metal containers, in their red-and-silver color combination, lacked adequate sales-stimulating power and were also rather limited in the amount of product and use information carried. No provision had been made in the original package design for a price patch. Since the Accent packages were similar to those customarily used for many spices, the product was usually relegated to inconspicuous display in the spice section, affording no opportunity to promote related selling of Accent with meats, vegetables and other food products whose taste it enhances.

Digging for further information,

the design firm sent representatives into the field to interview store managers, institutional users and consumers. This investigation showed that Accent was not customarily displayed in its shipper-carton in most retail outlets because the carton was too large for display in high-volume food stores. In some locations, cans were removed from the display cartons for price marking and the displays discarded. Of considerable interest was the fact that when the display carton was retained and the product placed outside the spice section, sales were up 50% or more, showing that the product had a good potential impulse sale if the proper conditions could be established.

Also apparent from the market survey was the need for stronger use of the Accent trade name, subordination of the generic name, monosodium glutamate, and more specific information on the package concerning the product and its uses. Dealers, it was found, did not feel that it should be necessary for them to explain the use of Accent to the customer; in today's self-service merchandising scheme, this is one of the basic functions of the package.

Another designer recommendation was to the effect that appropriate food illustrations might be used to lend definite appetite appeal to the packages, with reinforcing copy emphasizing the economy of the product. And although the original distribution pattern was keyed primarily to the 4- and 8-oz. packages, the study revealed that the 1-oz. container was actually most suitable for favorable display in high-volume outlets and would provide a means of encouraging new customers to try the product. This led to a recommendation that the 1-oz. size be promoted as an introductory or trial unit, with the 4- and 8-oz. packages used mainly for continuity of purchase.

It was evident from the consumer interviews that relatively few users of Accent had been persuaded to buy the product through the influence of store displays; most users indicated that their interest had been stimulated through magazine or word-of-mouth advertising. In order to make possible more effective brand promotion at the point of sale, in the interest of increased impulse buying, simplification of the Accent logotype was recommended, along with creation of a strong family-design treatment mak-



NEW MERCHANTISING approach is typified by this folding counter-display carton with brilliant red background and appetite-tempting full-color foods. Emphasis is on this 1-oz. size to win new, regular users. Molded plastic turn-top, specially designed for trouble-free shaker operation, is temporarily protected by formed acetate slip cover, which also serves for price marking. Important instruction folder is applied to each container with low-tack pressure-sensitive cellulose tape.

ing it easy for consumers to identify the product regardless of package size.

Design changes

Accompanying photographs of representative new packages in the Accent line illustrate how the preceding recommendations, along with others emanating both from the company and the design organization, have been put into effect. The new basic color combination is red and white, giving the packages much more sparkle and appeal. The revised logotype, consisting of a modified white rectangle enclosing the Accent name in easier-to-read red letters, provides

unmistakable identity on all package sizes. Another important recognition device consists of a series of white scallops encircling the top edge of most of the packages, providing a "kitchen feeling."

The need for more product information was met by including, on the front panel, the statement, "Brings out all the natural flavor of your favorite dish—all meats . . . vegetables . . . fish." On the back panel, the logotype is repeated, supplemented by more detailed product and use information and the *Good Housekeeping* seal. Inclusion of the circled "U" kosher symbol on the packages, indicating that the product is of vege-

THIRD-SHAKER set promotes the idea that Accent is as necessary as salt and pepper. It is designed to be hung on the kitchen wall.



table, not animal, derivation, increases the sales potential among those of the Jewish faith.

Included in the range of consumer-sized Acent canisters, all of which carry the family-design treatment, are the 1-oz. "Introductory Size," 4-oz. "Home Size," 8-oz. "Economy Size" and 1-lb. "Gourmet" package. The latter consists of a lithographed metal can with lift-up type of pour spout and white lithographed metal cover carrying the new logotype, while the other three packages are fibre tubes with metal bottoms and revolving plastic "shake and pour" tops.

Line drawings of various food items appear on the back panels of all but the 1-oz. package, supplemented by a line illustration of a housewife on the 4- and 8-oz. containers and a chef on the 1-lb. metal can.

The use of the new-type dispenser containers is based on the discovery, made during the packaging and merchandising survey, that widespread opposition existed among consumers against certain types of stock metal or paperboard canisters having rotating metal shaker-pourer tops. Housewives complained that the tops were inconvenient, difficult to manipulate and a frequent cause of broken fingernails. In studying a possible answer to this problem, models of various types of containers, both with and without dispensing tops, were shown to housewives for their comments. The final design adopted represented a combination of features of those containers shown to be favored.

FOR THE ORIENT, where Acent originated, product carries Oriental name and lettering. It is exported in these blue and silver 1- and 10-lb. cans.



The dispensing mechanism of the new 1-, 4- and 8-oz. fibre canisters is a white molded plastic disk, having one major opening and several small "sifter" holes. A vertical rib projecting from the top of the disk makes it easy to turn without risking the fingernails. Over the top of the canister is a protective slip cap formed of transparent cellulose acetate sheet which not only keeps the tops of the packages clean until opened by the housewife, but also affords a surface on which the unit price may be stamped by the retail store. Once removed, the plastic shield is customarily discarded, leaving no unsightly price mark on the package.

Design continuity is carried through to the square 1-lb. metal canister with friction-style top, sold to institutional users, and the large round metal canister which holds 10 lbs. of the product. On the latter package, white pressure-sensitive cellulose tape is applied around the edge of the lid for a more positive seal. This container also is for institutional use only.

Since its first appearance on the consumer market, Acent has also been sold in 4-oz. glass shakers with red plastic sifter tops—the beginning of International's continuing campaign to get a "third shaker" into the average household. At present, these glass containers are being merchandised in several ways, including the special "Third Shaker" sets described below and through a deal package offering the shaker for 1 cent extra when purchased with a 4-oz. square metal canister of Acent. The folding display carton used for this special offer is attractively printed in red and black, with a prominent price spot on the top panel and detailed information on the back panel concerning proper use of the product with meats, fish, poultry, gravies, sauces, soups, salads, cheese dishes and vegetables. The carton is designed with a large cut-out window in the front through which the shaker and metal container may be seen and examined. The Acent name in red, together with several musical notes and the slogan, "Makes food flavors sing," appear directly on the clear glass shakers.

The special "Third Shaker" sets have also been included in International's new package design program. The sets consist of three of the glass shakers—labeled Salt, Pepper and Acent, respectively—and a spe-

cially designed rack molded of transparent plastic, which may be fastened to the wall if desired. Formerly, these sets were packed in a somewhat cumbersome corrugated container which lacked sales appeal and was too large to encourage store displays. This unit has been replaced by a handsome folding carton printed in red and black, utilizing a modern background of informal vertical and horizontal lines and featuring on the display panel a large halftone illustration of the set, flanked by the new logotype in prominent size. The logotype is repeated on one end panel along with a halftone illustration of one of the shakers in use and on the top of the package, which also includes a solid red panel with sales copy in white reverse letters. The back panel of the box includes detailed use instructions, supplemented by three lively line drawings.

Within the package, the glass shakers are cushioned by strips of cellulose wadding to prevent movement. As a further insurance against breakage, a die-cut paperboard insert or pad is slipped over the necks of the containers before the carton is closed. These cartons are individually cellophane wrapped, providing an additional sparkle which encourages use of the sets as gifts and also protecting the white background surface of the package. For direct mailing of the "Third Shaker" sets, special corrugated shippers are used which snugly hold one package. Printed in red, they carry an illustration of the set and also an address panel which may be filled in to simplify mailing.

The increased emphasis on point-of-sale display is indicated by the new counter display cartons used to hold a dozen of the 1- and 4-oz. shaker-top containers. Cleanly printed in red on white coated stock, these folding cartons are constructed with a quickly inserted inner platform providing a tiered display for the three rows of packages. The die-cut riser highlights the new Acent logotype along with brief sales copy and an appetizing color illustration of a platter of food ready for serving. Four different illustrations are used to obtain variety of display in the retail outlet. Side panels of the cartons repeat the Acent logotype while the front lower section carries the statement, "Makes all good food taste better. Glorifies low budget meals, too, for less than 1/10 of a cent (This article continued on page 228)

Radar in re-use 'cans'

G. E.'s solution to an Air Force

packaging problem cuts weight, cube and time

while boosting protection and utility

The old packaging axiom that the solution of one problem often carries with it the solution of other problems as well is illustrated by General Electric's development of a new type of square metal re-usable container for military electronic-equipment components.

Air Force authorities at the Wright-Patterson Air Force Base, Ohio, asked engineers of the General Electric Light Military Electronic Equipment Department, Utica, N. Y., to design a container which could be used to ship, store and reship units of radar sets throughout their active life. When this assignment had been carried out by G.E.'s Engineering Data section, not only had a re-usable container been created, but a cheaper, sturdier, lighter and less bulky package had also emerged.

The need for a re-usable container was felt for three reasons:

1. If a radar set had to be reshipped after its initial delivery to the Armed Forces (for overhaul or any other purpose), it was likely to be damaged seriously while in transit because of the absence of adequate packaging materials. Thus an antenna sent out for replacement of a minor part might be knocked about severely en route to a maintenance depot and become a candidate for extensive major repairs.

2. The old-style package, a wooden crate with corrugated and excelsior inserts, normally was scrapped when its contents had been removed. This meant that new labor and materials costs were incurred whenever a radar set was reshipped or placed in storage.

3. Under the now-outmoded system, the electronic component was put into a corrugated box and wedged in place with flat corrugated inserts. The box was closed and sealed inside a water-vapor-resistant foil bag. This in turn was wrapped in chemi-



COMPARISON is studied by Herman F. Konig (right), general manager of G.E.'s Light Military Electronic Equipment Dept., and Richard H. Thomas, who designed the new re-usable container. Cube of container has been cut in half and packing time has been reduced to one-fifth.

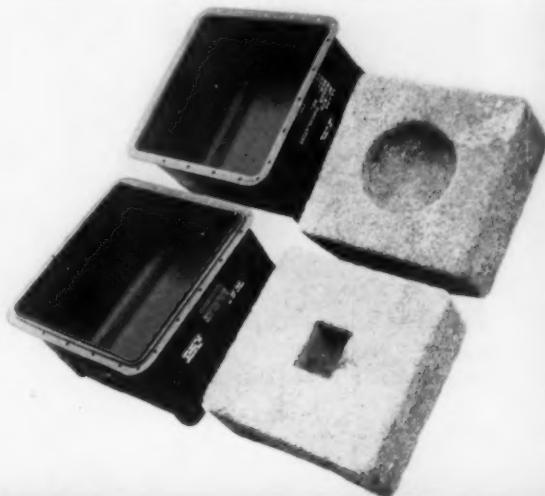
cally treated, waterproof, corrugated paper, sealed and then packed tightly with excelsior inside a stout wooden crate. The resulting package was heavy, unwieldy, unduly bulky for storage purposes and not a reliable protection against shock, moisture and fungus.

To eliminate these inadequacies and disadvantages, the Wright-Patterson authorities sought a container that would be fully re-usable—and which would meet existing requirements of sturdiness, airtightness and

resistance to fungus and moisture hazards.

Deciding on the proper shape for a container was the initial problem. The only type then readily accessible was a cylindrical steel can. This had a separate cover which was held in place by a recessed closure ring fastened by a single bolt. This container was unsatisfactory because it suffered damage when subjected to the required drop tests: either the closure ring would flatten out in such a way as to prevent easy opening of

DUNNAGE PADS molded of rubberized animal hair protect delicate radar equipment components from shock. Rubber gasket seals 14-gauge steel container against moisture and fungus hazards.



the can, or it would rupture and release the cover. In either case the prescribed airtight seal was lost. Another objection to a round container was the fact that a high percentage of available shipping space was wasted. These and other drawbacks of the round container suggested that a square container, with a center closure, would be preferable.

Having decided on a square container, the designer incorporated features which added to its usefulness for packaging electronic equipment. Ten basic sizes were planned, to encompass the different sizes and shapes of equipment which would require re-usable containers. These containers are made in two sections: a base and a cover, with closure edges flared to accommodate bolts, washers and nuts.

Sealing the container is accomplished by manually drawing the base and cover together with bolts. (Snap fasteners may eventually be used instead of bolts.) This compresses a rubber O-ring gasket which is held in place by a baffle welded to the inside of the container's base. One of the fastening bolts is sealed with a standard lead seal through a hole in its end, to show that the container is finally packed. The airtight gasket satisfies testing requirements for elasticity, compressibility and reaction to cold and heat.

At first it was planned that the containers would be fabricated by the drawing process, but it soon became clear that this would entail tooling costs in excess of \$200,000. After much trial and error, the power brake

and weld method of fabrication, which produces an airtight container at surprisingly low cost, was found to be the most satisfactory. Use of this method of fabricating containers of 14-gauge steel, reinforced at the corners by 12-gauge steel, resulted in a container so sturdy that it satisfied all relevant Armed Forces requirements.

The next major problem was dunnage—the selection of a material to be placed inside the container to hold the packaged unit in place and cushion it against shock. The Air Force had ruled out wood, cardboard, excelsior and paper compounds because they tend to absorb moisture and therefore, unless artificially dehydrated before packing, might lead to rusting or mildew. Research disclosed that



CORRUGATED INSERTS and pads had to be constructed and placed around the component, within a corrugated carton.

TWO MEN WERE NEEDED to stow the assembled pack within the larger corrugated paperboard container.



CARTON WAS WRAPPED and sealed in foil and overwrapped with chemically treated corrugated paper.



CARTON WAS PACKED in excelsior in wood crate.



CRATE WAS NAILED shut. This heavy package had no re-use value.

THE NEW WAY



PRODUCT IS PLACED directly in rubber-hair pads, which are formed in such a way as to hold the part being packaged firmly in position as well as to cushion it.



TOP is placed over rubber gasket. Air filler and pressure-relief valves are in small metal hood at front.



COVER IS BOLTED tight to base with torque wrench. The entire packaging process has taken only a half hour, in comparison with 2½ hrs. for the old way.

there were three practical possibilities: synthetic cushioning, foam rubber and rubberized animal hair. Synthetic substances were eliminated from consideration (at any rate, for the present) because they have not been carried past the development stage for cushioning applications.

Rubberized animal hair was eventually chosen in preference to foam rubber because (1) it is less affected by extreme variations in temperature, (2) its surface is less likely to be ruptured by continual vibration, (3) it is lighter in weight and (4) it is less expensive.

Rubberized hair can be shaped to fit the package and the packaged unit by either of two methods—molding and die cutting. Comparative experiments showed that molding was more suitable. In most cases, as few as two dunnage pads are supplied, one inside the cover and one in the base of the container. By careful design of recesses in the pads, modulators, antennas, radar set controls, etc., can be fitted snugly. Dunnage pads are especially designed for each new unit, with their contours planned in such a way that the force of a shock is evenly distributed. Density of the rubberized hair depends upon the weight and shape of the component it protects; in general, the heavier the component, the denser the dunnage.

Other physical features of re-usable containers include steel drop handles attached at the sides of the base (on containers which, when packed, weigh less than 200 lbs.) and 4-in. extensions of the legs to accommodate lift trucks (for containers which are larger sized).

To control humidity and air pressure inside the container, an air filler valve and an air-pressure relief valve are mounted on the front of the base,

under a protective cover. When the unit is to be stored under humid tropical conditions, the air filler valve is used to pass in dehydrated air. This minimizes fungus and moisture hazards. The automatic air-pressure relief valve permits equalization of inside-to-outside pressures when the container encounters low pressure conditions.

The principal purpose of this valve (This article continued on page 244)

CONTAINERS STACK for shipment on interlocking corner posts, when a quantity of the same size is shipped. The photograph below illustrates the five different sizes of containers used by G. E.





PHOTOS COURTESY STANDARD FOLDING TRAYS CORP.



SEQUENCE of photos shows, from top: glued blank as received by Rockwood & Co.; flat blank; simple method of set-up by folding the end flaps over and down; and finished, cellophane-overwrapped packages of candy. Exceptional cushioning and extreme rigidity at low cost is provided by the multiple end flaps (six thicknesses of board over most of the end area) and the folded center divider. Solid sulphite stock is used.

Non-crush

The problem of protecting a delicate chocolate candy wafer against breakage while still giving it a sales-alluring package for better drug and department stores has been neatly handled by the Rockwood Chocolate Co. of Brooklyn with a new type of one-piece, end-cushioned folding tray with a center divider and cellophane overwrap.

Especially designed for Rockwood, the tray is a modification of the style frequently used in the produce field for packaging tomatoes and other items. Rockwood saw that with modifications the same type of tray could protect the four flavors of its chocolate Waflets, including mint, milk chocolate, orange and rum.

The new printed tray introduces principles seldom used in the packaging of candy. Its advantageous features include a doubled lengthwise center divider, reinforced bottom and triple-thick locking end flaps (actually six thicknesses of board over most of the end area), which give the package extreme rigidity and, at the same time, exceptional cushioning qualities. The tray itself is made of solid sulphite stock which, when formed into board, shows a high tear test.

Due to the springiness of the tray, a cost-saving tight cellophane overwrap can be made without crushing the delicate Waflets in the process or splitting the cellophane. In addition, the absence of slotted sides or corner locks reduces the possibility of jamming the cellophane-overwrapping machines, with resulting down time.

The built-in double center divider not only separates two rows of chocolates, but also acts as a center cushion, preventing damage in transit, handling and stacking. Similarly, the multi-thick end flaps, which rest against the divider, give springy, cushioned protection to the ends and top of the tray and at the same time prevent the individual Waflets from slipping. Air spaces in the multiwall divider and ends also have the effect of a cushion action and allow a certain flexibility when the chocolate is compressed against the tray ends.

Before the new tray was finally adopted, Rockwood had an outside organization test it for breakage un-

candy tray

Rockwood's special construction with center divider and multiple ends stops breakage on a delicate chocolate product

der conditions of rough handling. Rockwood set up its trays of Waflets and packed them in corrugated cartons as usually shipped. Received by the testing organization, the unopened cartons were put through a revolving drum test which included 30 different falls. A similar but less rigorous test was followed for the individual packages. The tray won unqualified approval, having protected the delicate wafers perfectly.

Previously, the wafers were packaged in a tray with a separate divider which had to be inserted by hand. This slowed operations considerably since each operator could set up only 16 trays a minute. The new tray is so designed that it can be easily set up by hand, at the wrapping-machine rate of 60 a minute, simply by pressing both end flaps down into the tray, which almost automatically causes the center divider to come up into position. However, Rockwood has elected to perform the operation automatically on a standard tray-erecting machine which offers speeds up to 95 a minute.

The filling rate has been maintained at 16 per minute, but the line now requires only three girls, or half the number previously used, according to A. R. Rodger, product control man-

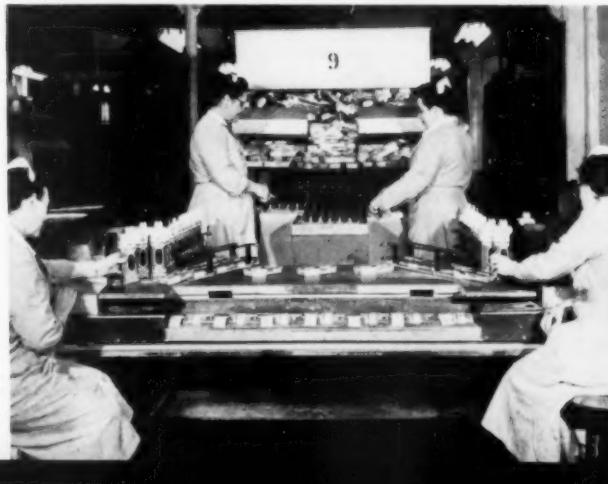
ager of the company. The faster speed per operator is mostly due to the ease of filling a tray with a uniform, automatically set up divider. Even faster speeds are anticipated in the future when the entire line, including filling, may be mechanized.

In the final operation the filled trays are loaded on a conveyor which carries them through a standard type of cellophane overwrapping and heat-sealing machine before they are packed two dozen to a shipping case.

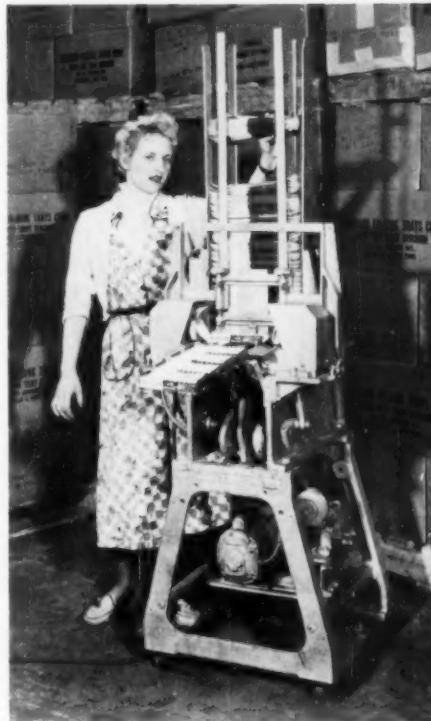
Retail sales success is credited not only to delivery of the candy in perfect, unbroken condition, but to appetite-whetting design of the printed cellophane overwrap—a different color for each of the four flavors of Waflets. The design includes a simulated ribbon tie that hides the center divider, yet gives an unbroken view of the candies within.

CREDITS: Trays and set-up machine by Standard Folding Trays Corp., 418-450 Johnson Ave., Brooklyn. Printed cellophane by Cellu-Craft Products Corp., 133-23 35 Ave., Flushing, N. Y. Cellophane overwrapping machine by Package Machinery Co., W. Chestnut St., East Longmeadow P. O., Springfield, Mass. Shipping containers by National Container Corp., 7 Central Park W., New York 23.

TRAY LOADING is expedited by the integral divider. One operator can fill a tray in 12 seconds, as against 20 seconds for the previous tray with hand-inserted divider.



UNINTERRUPTED FLOW to shipping cases is facilitated by the design of tray, which lets the cellophane-overwrap machine (right) operate in long, unbroken runs.



SET-UP MACHINE can turn out 95 trays a minute, replaces three girls used to set up previous Rockwood trays. The new tray can also be set up by hand at the rate of 60 trays per minute.



"The glass package is part and parcel of today's super market"

**says Fred Meijer, Executive Vice President,
Meijer's Super Markets, Inc., Grand Rapids, Mich.**

"The glass package has helped to build retail grocery sales. The following are a few everyday examples: The glass jar for soluble coffee helps to make it more convenient than ever to enjoy a stimulating cup of coffee; today, beets are largely packed in glass which makes it easier for the housewife to see the different styles such as whole, cut, diced and shoe-string; fruits like figs and fruits for salad owe

much of their present popularity to glass which displays their appetizing colors.

"*We feel the glass package is part and parcel of today's super markets.* It has helped to build sales in the past, and undoubtedly many present-day items and future new ones will be helped through glass packaging to build a growing food business."



Displays of glass packages for instant coffee make extra impulse sales. And when displays and shelves are fully stocked, a recent survey by PROGRESSIVE GROCER shows coffee sales increase 17%.



Glass is the perfect self-selling package. And for instant coffee the convenience of glass matches the convenience of the product; easy to open and reseal; easy to spoon from; keeps contents fresh and dry.

Today's self-service selling demands a self-selling package — GLASS!

Ever notice how cleverly some packages meet the challenge of self-selling?

Here's a good example: This glass package is an excellent salespackage for instant coffee. Housewives like it because it's convenient . . . shows contents . . . is easy to spoon from . . . keeps contents fresh and dry no matter how many times it is opened and closed. Proof of instant coffee's convenience—sales since 1946 have

almost quadrupled and almost all of this product is packed in glass.

The glass package for instant coffee has a depressed panel on its lithographed closure to permit safe stacking of one glass jar on top of another without the need of cardboard dividers. Tacseal inner liner over top of jar makes package tamper-proof.

Duraglas Containers Sell Food By Sight

DURAGLAS CONTAINERS
AN

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO



Push-cart for quick pies

A gay-colored "pie-wagon" floor stand makes a self-selection attraction of six different 7-Minit ready-to-make pie-crust and filling mixes marketed by National Selected Products in supermarkets and other grocery outlets.

The display is made of white corrugated board, rubber-plate printed in high-gloss inks in brilliant orange and yellow. A circus effect is achieved by the striped canopy design at the top of the unit. In each of the six white stripes appears a laughing clown holding a banner. The six banners spell out the six pie flavors—chocolate, lemon, banana cream, pumpkin, coconut and Boston cream. The cartons of mix are stacked in the bin section of the unit in six rows, each three high, according to the flavors indicated by the six banners above. At either side of the prominently displayed product name at the top are die-cut circles resembling balloons. Across the bin section, copy points out "Both crust mix and filling mix in one box," with space provided for price marking.

CREDIT: Display by Gibraltar Corrugated Paper Co., Display Div., North Bergen, N. J.

DISPLAY

Doll-sized cradle and a handy revolving unit aid baby-pants sales



Two intriguing self-service displays are introducing Industrial Rayon Corp.'s new baby pants, made of the company's waterproof Spun-lo fabric. One is a doll-sized cradle with built-in steps to hold the packages at various levels. The cradle is constructed of a sturdy wood-kraft lamination die cut and covered with paper, silk screened to give a wood-grain effect. The second display is a two-tiered revolving merchandiser. Materials used in this unit are lithographed metal, composition board and wood. The die-cut duckling that tops the display, made of the wood-kraft lamination and silk screened, is used as the dominant design element of the packages themselves. Individual cartons are acetate-windowed, book-type containers with overlay windows that give a two-dimensional effect. The extra carton flap permits the package to stand by itself as a display.

CREDITS: Displays by Robert Kayton Associates, Inc., New York. Carton by Universal Folding Box Co., Inc., Hoboken, N. J.

Furniture polish with an aristocratic label

Quality appeal is achieved with a simple one-piece black acrylic plastic counter unit for newly designed packages of W. & J. Sloan Private Formula furniture polish, which for the first time is to be nationally distributed in housewares stores and supermarkets. Relatively low in fabrication cost, the unit is made of an acrylic sheet measuring about 6 by 15 in. The sheet is bent along the 15-in. measurement about 1½ in. back from the forward edge. The resulting narrow lip is drilled with four equidistant holes large enough to accommodate the bottle necks. The upper area is silk screened in white rubber-base ink. To set up the display, caps are removed from four stock or dummy bottles, their necks slipped through the holes, then their caps replaced. New plain cylinder bottles for the polish, which is made and packaged by the Laramie Chemical Corp., have tastefully designed full-depth labels in black, white and metallic gold.

CREDITS: Display fabricated by Berton Plastics, New York, and silk screened by Superb Art Displays, Inc., New York. Bottles by Maryland Glass Corp., Baltimore. Closures by Armstrong Cork Co., Lancaster, Pa. Labels by Lehrer-Shappgold Press, New York.



GALLERY

Modern art principle makes the hanging slippers move

Paperboard footforms that hang from wire arms create the mobile effect for this self-service merchandiser to promote gift-packaged Slipperettes, knitted slippers for women and children, made by the Ripon Knitting Works. A modern art principle is used in suspending the Slipperettes mobile-like above the display rack. This effect is obtained by a support at the back of the rack, to which are attached two sturdy wire arms. From these hang the two footforms, made of heavy paperboard, on which are placed the two styles of slippers. A dozen gift packages of the slippers are displayed on two eye-catching levels at the base of the unit. The compact merchandiser occupies less than 1 sq. ft. of counter space and measures 12½ in. wide by 11 in. deep by 21 in. high. It is built of metal finished in a black oxidized color, with rubber feet to prevent scratching counters. It knocks down for easy assembly.

CREDITS: Display by W. L. Stensgaard & Associates, Chicago. Gift boxes by A. Geo. Schulz Co., Milwaukee.



THE POTATO GOES MODERN



PHOTO COURTESY NASHUA CORP.

THEY'RE WASHED! and their quality and cleanliness are visible. Those are the factors impelling housewives to pick Maine potatoes packaged in polyethylene bags at a rate of nearly two to one, even when they are sold at a premium. Polyethylene bagging, in these popular 5- and 10-lb. sizes, is now sweeping the potato industry from coast to coast.

The hardy potato, for years thought of as a staple that people need and buy as a matter of routine, can be, with proper packaging, as merchandisable as candy, packers and retailers are now beginning to realize. Formerly sold unwashed and in bulk, or in nondescript plain paper bags, the potato is now even being washed, scrubbed—sometimes even pre-peeled and pre-sliced—and put in a variety of types of bags under the grower's or marketer's own brand name. At last the potato is being appropriately backed up with the same kind of branded identity which is the support of thousands of other products sold in today's supermarket.

Back of this is a concerted effort by the potato industry to bolster lagging sales through a planned program of packaging and merchandising. The

appeal of visibility packaging, the convenience of a ready-to-use product and the quality implicit in the grading and washing procedure are capturing the imagination of the public and building increased sales. The industry is today selling potatoes, not dumping them.

Most conspicuous in recent developments is the use of well-printed polyethylene bags, which provide the strength necessary to carry five or 10 lbs.—the usual retail weights—and also give the kind of visibility which is essential if new quality and convenience features such as washing, peeling and slicing are to be promoted. However, the older types of consumer-sized potato bags have their advantages and seem to be holding their own. Mesh bags and mesh-window paper bags provide a certain degree of trans-

parency and, whatever the type of package, there is new emphasis on convenience, quality and brand promotion.

Growth of polyethylene

Giving powerful impetus to these trends are the cooperative grower-shipper organizations in such big potato states as Maine, Idaho and the Dakotas. Where growers have lagged, some of the large chain and independent supermarket groups have picked up the ball and promoted well-prepared, well-packaged spuds under their own brand names. In the larger operations, considerable progress has been made in mechanization of bag filling and sealing. The sudden rise of polyethylene in this field has been due, as much as anything else, to the development of trouble-free methods

Sales-stimulating packaging at last reaches the lowly spud; visibility bags show off a cleaner, better, branded product

of handling and sealing the material. Polyethylene packaging of potatoes has only really begun to roll within the last year or so. Most packers feel that the experimental period is over, although there is still much room for improvement.

Consumers comment that polyethylene is cleaner than paper; it shows the contents; it's a re-usable storage container; it's tough, strong and resists breakage. A typical consumer reaction comes from one woman who, when asked why she paid a premium price, stated, "I would rather pay a little more for these potatoes and see that I am getting better merchandise than to buy these others and then find some bad ones when I get them home."

Her remarks explain why growers generally pack only top-quality potatoes in transparent polyethylene bags.

Experienced growers agree that polyethylene should be used only with washed potatoes, since its visibility is obviously not an asset with unwashed. The same is true of mesh bags. When used on unwashed potatoes, mesh constructions may permit the mud to sift out during transit and handling on the grocer's floor and in the display case.

Functionally, polyethylene permits controlled weight loss of potatoes due to its rate of moisture transmission. Some transmission is desirable. The bags are usually vented with $\frac{1}{4}$ -in. holes, to permit escape of gases and to control moisture, thus giving excellent storage life. Polyethylene helps retard greening of potatoes, but the degree is difficult to measure since it varies with the amount of light, atmospheric conditions and so forth. And of course the film has the physical strength to hold a heavy load, which not all transparent films can offer at economical cost.

A new entry into the field, designed to give longer shelf life to potatoes, is an amber- or brownish-tinted polyethylene. The amber color screens out considerable light without materially affecting visibility and allows display of potatoes from six to 10 days under average light conditions in the store, according to one supplier.

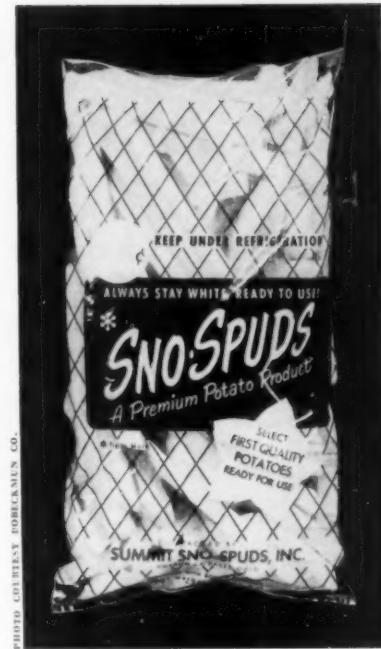
Multicolor printing on polyethylene has been so improved in recent years that the potato in film can now have a package as glamorous as any in the sleek supermarket.

Maine findings

Significant support for the advocates of polyethylene packaging comes from extensive research in consumer preferences by the Agricultural Experiment Station of the University of Maine. A recent six-week retail test conducted by the Station at supermarkets in Bangor and Portland, Me., and Boston and Worcester, Mass., indicated that housewives preferred polyethylene bags to other types of packages and preferred washed to unwashed potatoes even when a premium must be paid for this extra service.

Spurring the work of the Station was a serious per capita decline in potato consumption at a time when other fresh vegetables have shown an increase.

For the test, three types of containers for 10-lb. units of washed Maine potatoes were selected—printed polyethylene bags, mesh window bags and slatted corrugated boxes. These three test groups were placed side by side and given equal display space



THEY'RE PEELED and sliced! This further convenience, also making use of polyethylene packaging, is just now catching on in consumer market, due to solution of technical problems.

PHOTO COURTESY: UNION BAG.



VISIBILITY is essential to today's potato marketing. It is provided economically by use of mesh windows in paper bags.

As Maine votes, so votes the nation on pre-packaged potatoes



WASHED OR UNWASHED? Same potatoes, same package. Even at a 4-cent premium, 62.3% of shoppers chose the washed. At a 2-cent premium, the vote in this four-city test by the Maine Experiment Station was 76.8% in its favor; at the same price it was 85.5%.



PHOTOS COURTESY OF INN CLOTHESLINE.

WHAT KIND OF PACKAGE? Maine tested washed potatoes in 10-lb. polyethylene bags, mesh-window kraft bags and slatted fibreboard cartons. Bags far outsold box (94.6%) and polyethylene outdrew paper 54 to 40.6% even at 4-cent premium. At same price, polyethylene got 63.5% of sales.

on the produce counters of markets.

During the first two-week period, prices for the three groups were made the same to test the drawing power of the packaging rather than the appeal of price. When all prices were the same, 63.5% of the sales were in polyethylene bags, 25.7% in mesh window bags and 10.8% in slatted-top corrugated boxes. In the following two-weeks retail prices of the three different packages were adjusted to reflect the differences in container costs. Prices were 55 cents, 57 cents and 59

cents, respectively, for mesh-window bags, polyethylene bags and corrugated boxes. With this price structure, the polyethylene bags accounted for 62.3% of sales, showing only a slight decline, while the boxes dropped sharply to 4.4%. The mesh-window bags, selling at the lowest price, now represented 33.3% of total sales.

"Sales during this period indicated that consumers preferred the polyethylene bags even at prices which more than covered their additional cost," reports Alvah L. Perry of the

Maine Agricultural Experiment Station. "The sales figures also indicated that there was little likelihood that corrugated boxes would be an acceptable container at prices reflecting their higher cost."

For the final two weeks of the test, the price of potatoes in polyethylene bags was increased an additional two cents a package, making the retail price 59 cents a bag, or the same as that of the corrugated package. The mesh-window bags remained at the same price as the previous two weeks.

CLOSING DEVICES that gather and tie end of bag, like this plastic-covered wire, are preferred for potatoes in polyethylene. Imprinted red mesh design lends color to product.

PHOTO COURTESY PLASTIC CO.



MECHANIZATION at the supermarket level. This revolving turntable machine feeds potatoes into weighing and bag-filling chute, while another tier supplies lemons for hand packaging in trays. Versatile, compact machines like this one, adaptable to any kind of hardware produce, are encouraging supermarkets to do their own pre-packaging where growers fail to pre-package produce.

PHOTO COURTESY TRECOTT CO.



(55 cents). The premium was increased deliberately on polyethylene bags to give some indication as to how high a price shoppers would pay for them. At the four-cent premium, 54% of total sales were in polyethylene bags in comparison with 40.6% in mesh-window bags and 5.4% were in corrugated boxes.

A similar procedure was followed for testing the sale of washed in comparison with non-washed potatoes in polyethylene bags. When sold at the same price, 85.5% of the sales were washed potatoes and 14.5% were unwashed. Since two cents per 10-lb. bag amply covers washing costs, the washed potatoes were sold during the next two weeks at a two-cent premium over the unwashed. Shoppers apparently had little objection to the higher price, for 76.8% of the sales were in washed potatoes and 23.2% in unwashed.

The premium was hiked another two cents during the final two weeks of the test. Washed potatoes still accounted for 62.3% of the sales.

So impressed were Maine growers by the survey that six of them went immediately to washed potatoes: James Buck, Limestone; Potato Foods, Inc., Caribou; Russell Bros., Fort Fairfield; Jake Shur, Island Falls; Frank Shaw, Presque Isle, and Herschel Smith, Mars Hill. Russell Bros. is waxing its potatoes.

Idaho experience

In the great Idaho potato-growing area, packers like the Idaho Falls

Bonded Produce & Warehouse Co. and the L. S. Taube Co., both in Idaho Falls, report that 0.0025 polyethylene has reduced breakage to a fraction of 1%. This figure encompasses breakage experienced in the entire cycle of distribution from the packer, to the terminal, to the retailer, to the consumer.

Costwise, these growers report that the film bag averages about two cents under mesh bags and slightly over paper window bags. With the use of a belt-fed heat sealer or other automatic closing device, the labor force in the Idaho area has been reduced by one to two men per production line and the speed of operations increased from 10 to 20%, depending upon each set-up. One packer is packaging 2,000 ten-pound bags per hour on one belt and another reports 1,700 per hour.

In the coming season Idaho packers are expected to use something like 10 million polyethylene bags.

Since they ordinarily put only Select No. 1 potatoes in polyethylene, chafing and bruising must be kept to a minimum. They have found that this can be minimized by using a sealing system which tends to give the bags more of a flat pillow shape, whereas a twisted or tied polyethylene bag, and a paper or mesh bag make a rounder, tighter pack.

Flatter bags, they say, conform or nest better in the master container or baler bag. These are now commonly used to hold five 10-lb. or ten 5-lb. bags to protect the contents until they reach the store and to reduce



PHOTO COURTESY EQUITABLE PAPER BAG CO.

CONVENIENCE of carry-home popularizes 10-lb. bags. This kraft window bag with carry handle outsold standard, plain-front bag five to one in Grand Union test at same price.

handling time and labor cost. Since the flat packs are not drawn taut, there is negligible breakage when the balers are stacked six or eight deep in freight cars or at terminals.

Several growers point out that small

HIGH-SPEED MACHINE for the packing of potatoes gives closely regulated weight and automatic filling of bags. Only one operator is required to handle two filling heads. The machine is adaptable to the use of either kraft or film bags. It is being widely used by packing houses throughout the Western section of the country.



PHOTO COURTESY FOOD MACHINERY & CHEMICAL CO.

MASTER BAG made of heavy-duty kraft is frequently used for the shipment of either five 10-lb. or ten 5-lb. bags of pre-packaged potatoes. This is the combination which is used by the Idaho Potato Packers, New York.



PHOTO COURTESY EQUITABLE PAPER BAG CO.

bruises or nicks which are unavoidable at the packaging level usually show up cracks or eruptions on the surface of the potato after the skins have started to dehydrate. The moisture retention of polyethylene apparently retards or stops this deterioration.

Peeled potatoes

Peeling and even slicing the potato for French frying represents the latest step toward the ultimate in convenience for consumers.

PHOTO COURTESY VISKIN CORP.



COLORFUL PRINTING and good mechanical strength of polyethylene film have helped to lift potato sales from the doldrums. The 5-lb. bag is a popular size for the smaller household.

Pre-peeled potatoes are by no means new to the restaurant and institutional trade, having first appeared in 1936. About four years ago, MODERN PACKAGING described the potato peeling and packaging operation of Miller's Pre-Pared Potato Co., Inc., Blue Island, Ill.¹ At that time the company was well established in the institutional-sized package—a 30-lb. kraft bag with a polyethylene liner—but was just beginning to market test a 5-lb. polyethylene bag. Other packers were distributing peeled potatoes in 30-, 35- and 60-lb. sacks.

About the same time Premium Potato Products, Inc., Cleveland, long-time institutional suppliers, thought it might be feasible to package their potatoes cut for French frying in polyethylene bags for the retail market. Their first two bags, containing 8 and 12 oz., respectively, proved successful in test markets in both Cleveland and Chicago.

Despite the tempting promise of the development, Premium held back, figuring that sales potential would be more favorable in a few more years when more deep-fat fryers and electric stoves with deep-well cookers had been sold.

This year the company set out to capture the retail market with a franchise arrangement with growers in various parts of the country. Franchise holders are entitled to use of the company's "Sno-Spuds" trade name, the method of dipping the potatoes in a

special preservative and a standard package design with the franchise holder's signature at the bottom. The bags are now 24-oz., since, in the 1950 tests, Premium discovered that most shoppers bought two 12-oz. packages at a time. Transparency of the polyethylene with an open criss-cross design reveals the fresh, white appearance of the potatoes.

Growers claim that peeled potatoes might have made their debut long ago except for certain troublesome problems. Polyethylene seemingly provided the best package material. There was still, nevertheless, the problem of preventing the peeled spuds from oxidizing and turning brown. To prevent this undesirable reaction, most peeled potatoes are treated with sodium bi-sulfite—but this chemical by itself can impart an undesirable taste to the product. Premium has been long recognized for its outstanding preservative combination (a company secret) that is said to eliminate any unpleasant taste. Under refrigeration, usually recommended in the range of 32 to 40 deg. F., the potatoes stay fresh and white for two weeks or more, Premium claims.

The cut size of the potatoes make them quite versatile. They are $\frac{1}{4}$ in. square and can be cut into smaller cubes for salads or creaming or mashing. Cut-up Sno-Spuds will boil in about six minutes when prepared for mashing. According to Premium, the peeled spuds offer labor-, time-, space- and waste-saving advantages.

(This article continued on page 220)

PHOTO COURTESY BON AND PLASTICS.

Typical line operation in the Idaho field



BATTERY OF FILLERS is operated by attendants who merely place polyethylene bag in holding clamps and release a pre-weighed quantity of potatoes from the loading chute.



TILTED HEAT SEALER and conveyor close polyethylene bags at L. S. Taube Co., Idaho Falls. Lines at this packaging plant handle up to 2,000 ten-pound bags an hour.

HAIR DYE

Another Family of Prestige Products

packaged by **BURT**

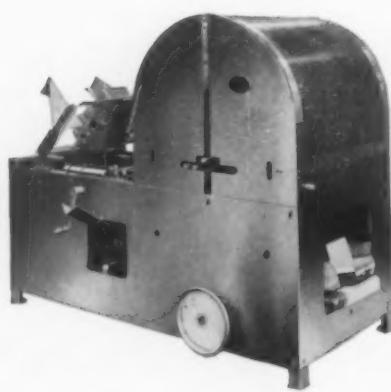


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TECHNICAL

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Charles A. Southwick Jr. • Technical Editor

Glass-reinforced paper

Non-woven glass-fibre scrim, introduced on the paper machine, gives superior strength at economical cost. By ROBERT T. SEITH*

During the last five or six years, the Mosinee Paper Mills Co. has been working on the development of unique reinforced paper structures having several properties of considerable interest to the packaging field.

Reinforcement with a non-woven glass-fibre mesh, or scrim, introduced onto a paper machine prior to the formation of the sheet, results in a substantial increase in physical properties over the more common laminated paper structures. In addition, since a converting operation is not necessary for introduction of the reinforcement, there is an economic advantage which should permit use of such materials in many additional fields as a replacement for reinforced papers with higher manufacturing costs.

Many different types of reinforced papers have been used previously. Generally, these papers have been laminated structures in which a reinforcing material is interposed between pre-formed, separate dried sheets of paper and then bonded to the paper by means of a suitable adhesive composition. For many applications, however, such papers have not been satisfactory. For example, most adhesives perform very poorly at temperatures below minus 30 deg. F. Our present global defense program in some cases precludes the use of packaging materials which are not flexible and easily handled at temper-

atures as low as minus 65 deg. F.

Exhaustive tests have indicated that the glass-reinforced paper, designated as Scrimtex¹, remains flexible and strong at temperatures as low as minus 80 deg. F. High temperatures can also cause delamination of the common laminated reinforced papers. With the integrated reinforced sheet, temperatures up to 425 deg. F. have been used in packaging molten materials without difficulty.

¹Registered trademark of the Mosinee Paper Mills Co. Patent pending.

Product and market development work during the past two years has indicated some primary applications within the packaging field for papers of this type, as follows:

1. Bags (multiwall and single ply) for special applications.
2. Solid fibre and corrugated shipping containers and other board applications such as temporary pallets.
3. Tarpaulins and case liners.
4. Special industrial applications (i.e., grain doors).

Most of our product development

I. TEST APPARATUS for evaluating the tensile strength of integrated reinforced paper. It tests a piece of paper up to 18 in. wide.



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2. TYPICAL FAILURE in standard, non-reinforced five-ply bag, showing tear migration. This photo was taken during field shipment of soda ash.



3. TYPICAL SUCCESS of glass-fibre-reinforced bag in retaining initial puncture and preventing failure through tear migration. This photo was taken during test shipment of soda ash.

work has been concentrated in the above fields. The purpose of this article is to outline the work which has been and is being done in the above fields. In some cases the work has been qualitative in nature, particularly in the field of low-temperature testing. Results to date definitely indicate an unusually wide field of applications for tough packaging papers of this type.

Construction and characteristics

Fiberglas² is introduced into the paper in order to provide a two-directional reinforcement. Fiberglas scrim, used as a reinforcing material, is not a woven fabric, but is made by coating the longitudinal yarns with a hot-melt adhesive and applying the cross yarns while the adhesive is still molten, thereby giving a weld at each intersection.³ Table I gives a general description of the types of yarn available in Scrimtex. An extra-strength Scrimtex is being produced on an experimental basis for heavy-duty packaging. Not enough data are available at present on the heavy-duty material to enable us to include detailed information. For the purposes of this discussion, all data presented pertain to standard (150- $\frac{1}{2}$ in., 2424 or 4848 ($\frac{1}{2}$ in. and $\frac{1}{8}$ in.) mesh) scrim.

Tables II and III illustrate certain important physical characteristics of Scrimtex compared to various paper products and one laminated reinforced sheet. The following tests are believed particularly significant from an over-all packaging standpoint:

TABLE I—GLASS CONSTRUCTION USED IN SCRIMTEX[®]

Standard	2424 ($\frac{1}{2}$ in. mesh) [†]
150- $\frac{1}{2}$ yard (300 strand twisted yarn)	4848 ($\frac{1}{4}$ in. mesh)
<i>Extra strength</i>	2424 ($\frac{1}{2}$ in. mesh)
150- $\frac{1}{2}$ in. yarn (450 strand twisted yarn)	4848 ($\frac{1}{4}$ in. mesh)
<i>Experimental extra strength</i>	2424 ($\frac{1}{2}$ in. mesh)
150- $\frac{1}{2}$ in. yarn (600 strand twisted yarn)	

[®] Glass scrim used in Scrimtex is manufactured by Owens-Corning Fiberglas Corp., 598 Madison Ave., New York 22.

[†] 2424—strands per lineal ft., warp and fill.

1. Puncture (General Electric)

2. Mullen
3. Torsion tear
4. Elmendorf tear

In an effort to place the test results on a more comparative basis, the result of the individual test was divided by the basis weight of the paper being tested and the result multiplied by 100 (see Table III). The results of these tests illustrate the increases in strength probably due to the fact that the reinforcement is included as an integral part of the paper. The laminated paper contains the same amount of Fiberglas and paper as the Scrimtex 2424 sample. The increases in tearing strength and puncture resistance suggest many possible appli-

TABLE II—COMPARATIVE PHYSICAL CHARACTERISTICS OF VARIOUS INDUSTRIAL PACKAGING PAPERS

	Basis weight lbs./3,000 ft. ²	Bursting 24 x 36 - 500 sheets	Bursting jumbo points	Torsion tear (in.-oz.) M.D. C.D.	Elmendorf tear M.D. C.D.	G. E. puncture unit
Scrimtex standard 2424	120#	112	221	111	1,770	811
Scrimtex standard 4848	120#	151	286	142	2,232	1,184
Water finish kraft liner	131#	94	96	85		254
Standard kraft	210#	148	141	146		425
V-board solid fibre	220#	148	134	147		72
Laminated [®] reinforced paper	159#	74	71	68	595	273
						35

[®] Reinforced with 2424, 150- $\frac{1}{2}$ Fiberglas yarn. Paper used in this laminate was manufactured by Mosinee Paper Mills Co., Mosinee, Wis.

² Registered trademark of the Owens-Corning Fiberglas Corp.

³ Information furnished by Owens-Corning Fiberglas Corp.

cations in the packaging industry. Through proper design of the reinforcement used in Scrimtex, strength characteristics can be varied to meet nearly any requirement consistent with other limitations such as flexibility and cost. At present Scrimtex is being produced at basis weights as low as 120# (24 x 36 - 500 sheets). The upper basis weight limit is about 225#.

Wet-strength resins, moldproofing agents, water-resistant resins and many other chemical additives may be added to the paper to obtain other characteristics of importance to specific packaging problems.

During the course of the development program, difficulties were encountered in attempting to measure accurately the tensile strength of Scrimtex. The narrow strip of paper (½ to 4 in.) normally used for such tests proved to be inaccurate due to difficulties encountered in lining up the reinforcement in the tensile tester. If a strand of glass is not exactly perpendicular to the jaws of the tester, an inaccurate test will result due to uneven stress across the width of the strip. In order accurately to evaluate the tensile strength of Scrimtex, a special machine was designed to test a sample of paper up to 18 in. wide. Fig. 1 is a photograph of the apparatus. This tester is used for control testing on the paper machine. We have found the tester to be accurate enough for this purpose, although not too satisfactory for research purposes.

Use in bag manufacture

Work on the development of the reinforced paper for use in paper shipping sacks has been done in co-operation with the Bemis Bro. Bag Co. of St. Louis. Although laminated reinforced structures had been evaluated by Bemis and others for use in paper shipping sacks in the past, it was felt that the increased strength and basic economy of Scrimtex justified additional investigation.

It is admittedly very difficult to evaluate bag characteristics in the laboratory. The most common method for laboratory evaluation is the drop test, which certainly is not as reproducible nor as accurate as would be desired. While a considerable amount of laboratory drop testing was done in earlier stages of our laboratory work, final decisions regarding bag efficiency were based on actual trial shipments.

Table IV shows comparative data

TABLE III—COMPARATIVE PHYSICAL CHARACTERISTICS OF VARIOUS INDUSTRIAL PACKAGING PAPERS

(Adjusted for inequalities in basis weight) $\frac{\text{Test}}{\text{B. W.}} \times 100^\circ$

	Bursting strength jumbo points	Torsion tear (in.-oz.)		Elmendorf tear		G. E. puncture unit
		M.D.	C.D.	M.D.	C.D.	
Scrimtex						
standard 2424 (120#)	93.5	184	92.5	1,475	735	94
Scrimtex						
standard 4848 (120#)	126.0	238	118	1,860	990	108
Water finish						
kraft liner (181#)	76.3	73.2	64.9		194	31
Standard						
kraft (210#)	70.5	67.1	69.5		201	34
V-board						
(220#)	67.4	61.0	66.8			33
Laminated						
reinforced paper (159#)	46.5	44.6	42.8	375	172	22

[°] In making this comparison, the results of the individual test are divided by the basis weight of the paper tested.

obtained in drop testing large bags containing various sizes of boxes. The results of these tests confirmed the superior puncture resistance of the reinforced paper as well as its ability to absorb shock. The drop tests were made on an automatic drop table from a height of 6 ft. Bags were dropped on all six sides successively. Boxes containing various materials (sand, rice, oats, etc.) were used to obtain a final load of 60 lbs. The bags tested were approximately 19 by 12 by 48 in. In addition, some of the Scrimtex bags were subjected to a water shower for 10 min. prior to testing.

Sewn, open-mouth, gusseted bags were used with either a sewn or a stapled closure. No problems were encountered in the tubing operation. Initial trials were made on both flat and intuck tubes. Results of this test were conclusive in one respect, namely, that on a drop basis the Scrimtex bags were substantially more effective than the four-ply multiwall bags for this purpose. Results of these tests were used as a basis for justifying extensive field tests and were not taken as necessarily conclusive in themselves.

An interesting series of drop tests has been made using Scrimtex bags

TABLE IV—DROP TESTS—SCRIMTEX BAGS (CONTAINING BOXES)
Automatic drop tests—6 ft., six sides, 9 by 12 by 48 in.

Bag construction	Drops to failure	Load density lbs./ft. ²	Observations
1/120# 2424 Scrimtex [°]	56+ (Average)	12.2	Condition excellent after 56 drops
3/60# natural kraft 1/60# crepe (four-ply multiwall)	23.5 (Average)	12.8	
2/60# natural kraft 1/60# crepe (three-ply multiwall)	18.5 (Average)	12.2	
1/120# 4848 Scrimtex 1/60# crepe	50+ (Average)	11.3	Condition excellent after 50 drops
1/120# 4848 Scrimtex 1/60# crepe	30+ (Average)	12.6	Bags after 10 min. water shower

[°] Basis weight—24 x 36—500 sheets.

TABLE V—COMPARATIVE SHIPMENT, SCRIMTEX BAGS VS. STANDARD FIVE-PLY MULTIWALL BAGS FROM BARBERTON, OHIO, TO MOSINEE WIS.
Bag contents—100# light soda ash, Columbia Southern Chemical Co.

Bag construction	Bags in shipment (total)	Total failures	% failure	Total paper basis weight
1/120# 2424 Scrimtex	100	32 ^a	32.0	120#
1/120# 2424 Scrimtex 1/50# natural kraft	216	2	0.9	170#
2/40# natural kraft 1/120# 2424 Scrimtex	93	0	0.0	200#
4/40# natural kraft 1/50# natural kraft	341	14	4.11	210#

^a Break in bag which resulted in any loss of contents was classed as a failure.

at temperatures of minus 65 deg. F. In this case, a 100-lb. bag consisting of two plies of 4848 standard Scrimtex and one ply of Aquabar⁴ (two-way-creped polyethylene sandwich) was compared to a standard Navy Department export cement bag. The standard export shipping sack consists of 13 layers of paper as follows:

2/50# natural kraft
1/30-30-30 asphalt laminated
2/60# natural kraft

To this five-ply bag, a five-ply "export" overslip is added, consisting of the following:

1/50# natural kraft
1/30-30-30 asphalt laminated
1/60# natural kraft
1/30-30-30 asphalt laminated
1/60# natural kraft

Drop tests were made at Fort Belvoir, Va., at minus 65 deg. F. The standard export cement bag broke on the first drop, while the Scrimtex bags lasted for as many as 22 drops without loss of cement. The 100-lb. bags

⁴H. P. Smith Paper Co., Chicago.

of cement were dropped from a height of 4 ft. on alternate faces. The bag construction was unusual in that a new polyethylene resin seam was used in place of the more conventional glued seam. Bags were filled through a creped-kraft, polyethylene-lined sleeve valve and heat sealed to provide a moisture barrier.

Drop testing at low temperatures is very difficult, since personnel could work only a short time in the cold chamber and had to be relieved every 20 min. during the tests. At times it was impossible to test more than eight bags per day. The tests were conducted in the cold chamber at the Engineer Research and Development Laboratories, Fort Belvoir.

Drop tests have been conducted on many materials now being shipped in multiwall bags or rigid containers and as many Scrimtex bag constructions as possible have been evaluated. These tests, however, have not been taken as a final evaluation of bag performance, due primarily to the rela-

tively poor reproducibility of the test method. The drop test is believed to be useful only for screening various bag constructions prior to actual field shipments.

Field shipments

Carload shipments of light soda ash in Scrimtex bags have been made during the past six months in cooperation with the Columbia Southern Chemical Co., Barberton, Ohio, and Bemis Bro. Bag Co. Soda ash is a comparatively low-cost commodity, but was considered to be characteristic of many other more-expensive chemicals. This material is normally shipped (where bulk shipment is impractical) as 100-lb. units in four- or five-ply multiwall bags. The present method of packaging appeared to be satisfactory except where exceptionally rough handling, storage and/or reshipments were involved.

The trial shipment which will be discussed in this article was made from Barberton, Ohio, to Mosinee, Wis. For comparative purposes, a quantity of five-ply multiwall bags was included in the car. Table V gives the results of this trial. Note that a single-ply Scrimtex bag is definitely inadequate for shipment of a powdered material. Any defect in the bag resulting in a loss of soda ash was considered as a failure. When a 50-lb. kraft liner was included in the bag construction, definite improvement was noted. These results have been confirmed in subsequent shipments.

A puncture or small rip in the standard bag resulted in nearly a complete loss of soda ash. The tendency for a small hole or tear to migrate or become larger during shipment and subsequent rehandling was very noticeable. Most of the multiwall-bag failures were tears extending over most of the bag (see Fig. 2). The Scrimtex (Fig. 3) tended to retain any puncture or small tear and prevented rupture of the bag liner. The damage to multiwall bags, as shown in Table V, is not excessive when we realize that an impact recorder experienced shocks up to 11 miles per hour in transit.

Based on the results of carload shipments, the following conclusions have been drawn:

1. A two-ply bag consisting of one ply 120# 2424 standard Scrimtex and one ply 50# natural kraft will outperform a five-ply multiwall bag (4/40# natural kraft, 1/50# natural

(This article continued on page 234)

TABLE VI—SCRIMTEX IN SOLID FIBRE AND CORRUGATED BOARD

Board construction	Mullen jumbo points	G. E. puncture unit	Torsion tear (in.-oz.)		Tensile (1" strip) lbs./in.	
			With	Across	With	Across
200# test "B" flute corrugated board	211	212	190	265	164	67.5
200# test "B" flute corrugated board + Scrimtex	333	474	620	675	320 ^a	105
0.060 solid fibreboard	272	240	232	385	300	98
0.060 solid fibreboard including Scrimtex	330	328	440	465	425 ^a	111
0.090 solid fibreboard	480	502	480	857	555	152
0.090 solid fibreboard including Scrimtex	667	670	942	1,200	Over	210

^a Tests made on 12-in.-wide sample.

Wood at low temperatures*

It generally gains strength at extreme low temperatures, but

in containers other factors must be considered. By KENNETH H. BOLLER†

In this day of world-wide trade and military activity, the research laboratories of the nation must supply information on strength and durability of packages and containers so that those packages and containers may be safely subjected to all the climates on the globe. We can no longer be satisfied with tests at normal room temperature; we must evaluate materials at extreme temperatures to insure their effectiveness under all conditions.

There are factors other than temperature that affect the strength and use of wood and wood-base materials; so to prevent a misinterpretation of the effect of temperature alone, a few of these other factors should be considered first.

Wood is orthotropic. It has three principal axes—longitudinal, radial and tangential—and the physical and mechanical properties are different in each direction. For example, the compressive strength in the longitudinal direction is nearly 10 times that in either the radial or tangential directions.

Mechanical tests made to determine basic strength properties of wood are usually conducted on straight-grain, clear material. Tests to determine the effect of knots, checks, shakes or other imperfections are made separately. Imperfections reduce the strength of wood.

The strength of wood is proportional to its density. Light-weight species like balsa, for example, are weak compared with dense species like hickory and oak.

Strength properties depend upon the rate and duration of loading. The change in strength is not great for small changes in rate of loading in the range of normal laboratory static testing, but the strength of bending specimens having a load duration of

one second is 110% of that at 300 seconds, the duration of a standard test.

Strength decreases with increases in duration of load, so that the strength after one year duration is about 65% of that at 300 seconds.

Next, the relationship of the strength of wood to its moisture content is very important, not only in solid, laminated or plywood, but also in wood products—paper, fibreboards and building boards. It is well known that the strength of these materials decreases as moisture content increases, so when the effect of some variable other than moisture is being determined, the moisture content must be controlled or taken into account. A physical property sometimes forgotten but nevertheless closely associated with moisture content is shrinkage. As the moisture content changes, fibrous materials shrink and swell, which results in setting up appreciable stresses.

Results of tests

The main purpose of this paper is to present information on the effect of temperature on the strength of wood and wood containers. There are not extensive test data available on this subject. Experiments as long as 25 years ago gave data on the strength of wood at room temperature after it had been heated to higher temperatures. These data were of great importance in establishing kiln-drying schedules for lumber.

More recently, J. D. MacLean of the Laboratory staff conducted experiments on the permanent loss in strength that accompanies long exposure of wood to high temperatures. Present investigations at the Laboratory are also aimed at the effect of abnormal temperatures on strength properties.

In the late '30s, Franz Kollman of Germany conducted a comprehensive series of tests on the mechanical properties of wood of various densi-

* A paper delivered at the Low-Temperature Symposium on Military Packaging Problems at the Quartermaster Food & Container Institute for the Armed Forces, Chicago, Dec., 1953.

† Engineer, Forest Products Laboratory, Madison, Wis.

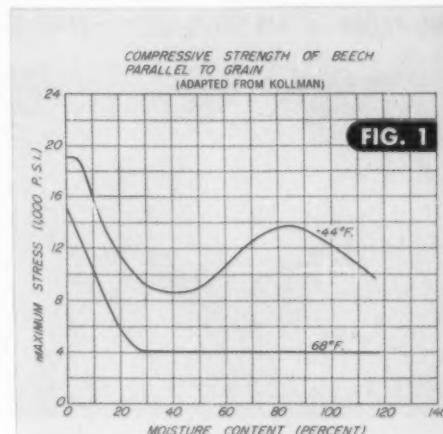


FIG. 1

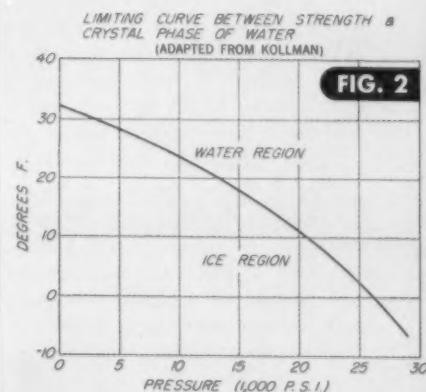


FIG. 2

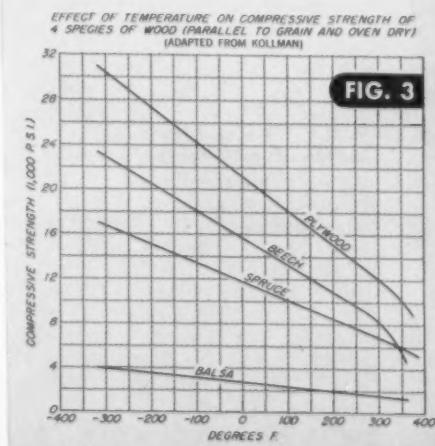


FIG. 3

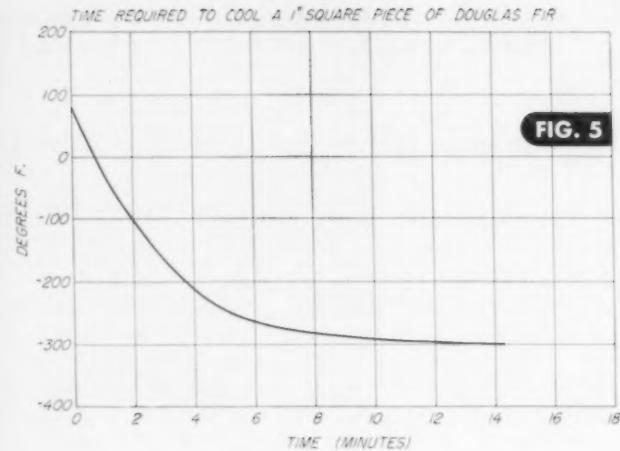


FIG. 5

4. TEST CHAMBER used at Forest Products Laboratory for making mechanical tests on wood at minus 300 deg. F.

ties at various moisture contents from minus 328 deg. F. to plus 350 deg. F.¹ He found that the strength of wood decreased with increases in temperature, which he said was in conformity with a general law of temperature governing the mechanical

¹"The Mechanical Properties of Wood of Different Moisture Contents Within Minus 200 Deg. C. to Plus 200 Deg. C. Temperature Range," N.A.C.A. Report No. 984 (Translation, 1941).

behavior of bodies. As the temperature rises, the resistance to form changes of every solid or liquid substance—constant in structure and composition—decreases.

Kollman found that the compressive strength of beech, parallel to grain, was greater at low temperatures than at high temperatures (Fig. 1). On this curve, where strength is

plotted against moisture content at two temperatures, it may be seen that at room temperature (68 deg. F.) the strength drops with increases in moisture content up to the fibre saturation point and then remains constant. This is a typical strength-moisture relationship curve for normal temperature conditions. At the sub-normal temperature of minus 44 deg. F., however, the curve obtained by Kollman does not follow this typical pattern. The cold strength is greater than the room-temperature strength, but the ratio of cold strength to room-temperature strength increases as the moisture content increases, with a limit at 82% moisture content. Kollman explains this phenomenon by



6. SUPPORT and loading head for making compression test perpendicular to grain at minus 300 deg. F.

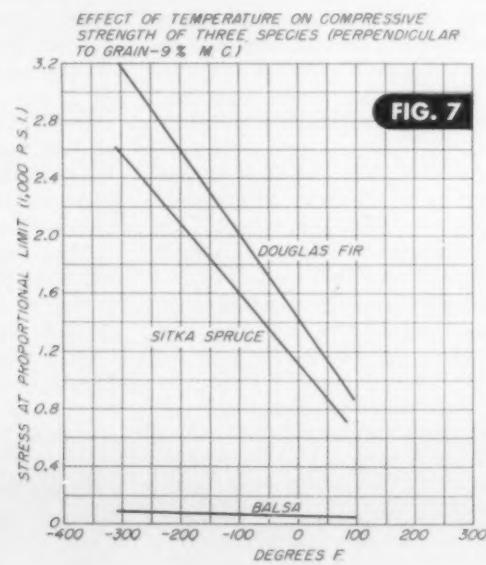


FIG. 7

comparing it to the strength of a rubber hose with ice forming on its inner wall. As more ice is formed the strength increases up to a certain point, then the pressure on the ice causes it to melt. The hose or the cell walls then support the load until the ice becomes thicker or the cell wall becomes deformed. The water-ice regions on a pressure-temperature curve are shown in Fig. 2. This figure shows the limiting curve between strength and crystal phase of water; as pressure increases, the melting temperature decreases. From these relationships it appears that there would be a family of curves on the strength-moisture coordinates (Fig. 1), one for each temperature.

Kollman also evaluated the compression strength, parallel to grain, of four materials of different densities at temperatures from minus 328 deg. F. to plus 350 deg. F. Balsa, spruce, beech and laminated beech were tested oven dry. The results of these tests (Fig. 3) show that the strength decreased with increases in temperatures as a straight-line function to about 275 deg. F. Above this temperature the strength decreased faster with increases in temperature. This fact is related to the creep rate, which increases with increases in temperature. These tests also show that the more dense the material, the faster its strength decreases with increases in temperature.

Tests on the effects of low temperature have been carried on at the Forest Products Laboratory to evaluate strengths in compression perpendicular to grain, tension, shear, bending, toughness and nail pull. Some



8. APPARATUS for obtaining deflection data in the bending test at minus 300 deg F.

strengths were evaluated at minus 70 deg. F. and some at minus 300 deg. F. Strength studies at minus 300 deg. F. were made in well-insulated cabinets cooled by liquid air (Fig. 4). The test chamber is a double-walled stainless-steel tank within an insulated plywood box. The refrigerant, liquid air, was forced out of a Dewar flask into the space between the double walls of the tank.

The rate at which a specimen can be cooled depends upon the relative mass of the specimen, the test cham-

10. COLD BOX and toughness machine arrangement utilized for making the tests at minus 300 deg. F.



11. INTERIOR VIEW of cold chamber and loading head of toughness machine for making tests at minus 300 deg. F.

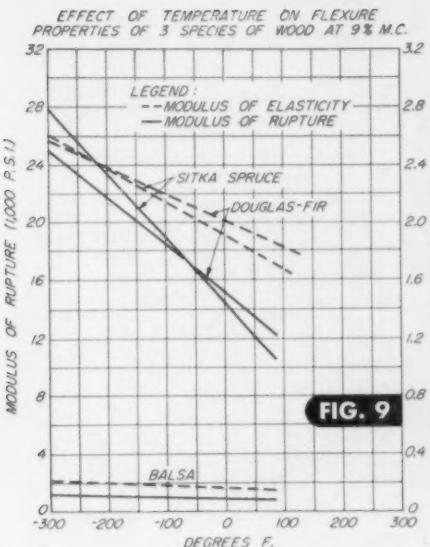
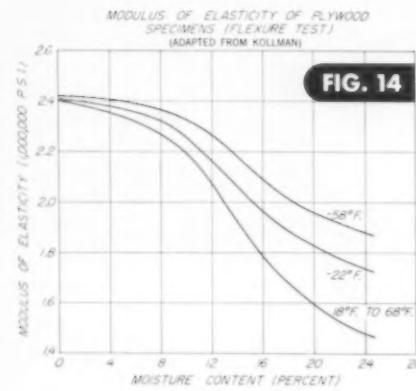
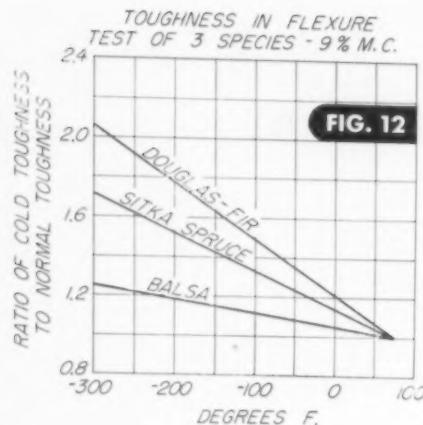


FIG. 9

ber and the coolant. With this apparatus a 1-by-1-by-4 in. piece of Douglas fir was cooled from room temperature to minus 300 deg. F. in about 12 minutes. The temperature-time curve is shown in Fig. 5.

Balsa, Douglas fir and Sitka spruce were tested in compression perpendicular to grain, bending and toughness at about 9% moisture content at room temperature and at minus 300 deg. F. The compression tests were made on 1-by-1-by-4-in. specimens. The support and loading head is shown in Fig. 6. The apparatus for holding the specimens fits snugly in the stainless-steel test tank. The compression area under the loading head is 1 by 2 inches. Deformation data were obtained between heads by a



dial which is located outside the cold chamber.

The results of these compression tests were plotted as stress at proportional limit against temperature (Fig. 7). Since a maximum load is not obtained in this kind of a test, the comparison of strengths is based on the proportional limit stress. The results show that the stress at minus 300 deg. F. is $2\frac{1}{2}$ to $3\frac{1}{2}$ times that at room temperature.

Bending tests on $\frac{1}{2}$ -by- $\frac{1}{2}$ -by-9-in. test specimens were made over a 7-in. span (Fig. 8). Fig. 9 shows two strength properties (modulus of rup-

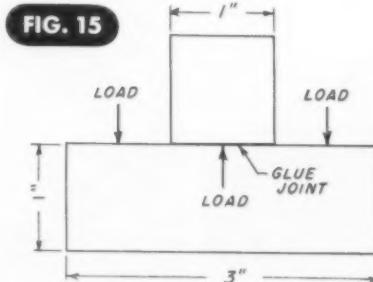
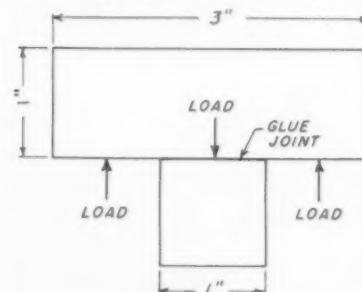


13. SUB-ZERO STORAGE of packages and wooden crates.

ture and modulus of elasticity) for each species with respect to temperature and in each instance there is the same characteristic increase in strength with decreases in temperature. The ratio of cold strength to room-temperature strength ranges from $1\frac{1}{2}$ to $2\frac{1}{2}$.

Toughness tests were conducted on the same three species on specimens $\frac{3}{4}$ by $\frac{1}{4}$ by $4\frac{1}{2}$ in., as shown in Figs. 10 and 11. The toughness machine was located outside the cold chamber and was connected to the specimen by a long steel rod. Test data on energy required to break the specimens at room and cold temperatures as recorded on the test machine cannot be used for design purposes, but can be used to compare species or temperature relations. The ratio of the toughness at the cold temperatures to that at room temperatures was found to be $1\frac{1}{2}$ to $2\frac{1}{2}$ (Fig. 12). Here again there is an increase in toughness with a decrease in temperature at 9% moisture content.

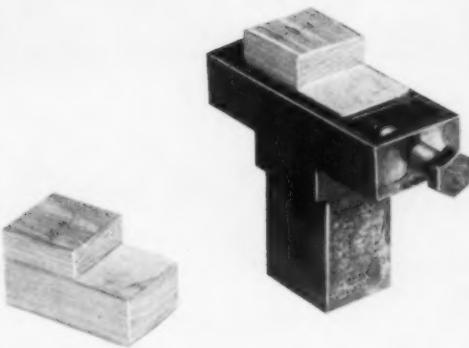
15. DIAGRAM of the type of tensile specimen which is used to obtain the strength of a wood joint at minus 300 deg. F.



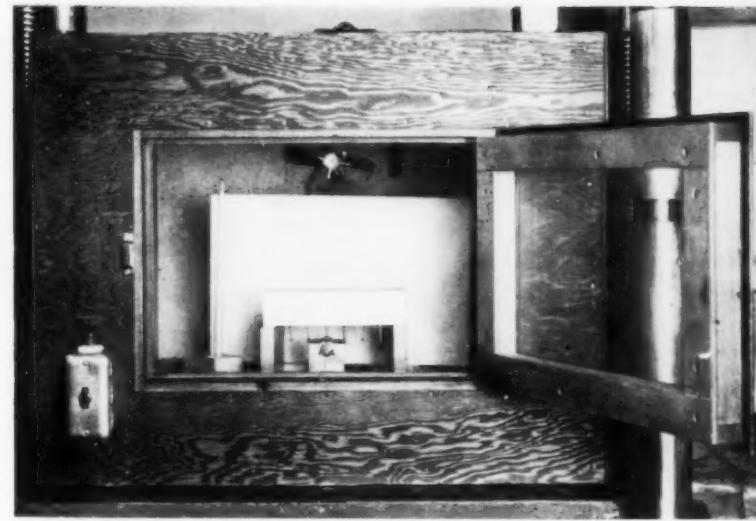
The problem remains: How do packages and wooden crates perform at low temperatures (Fig. 13)? It has been shown that the strength properties increase with decreasing temperature, yet there are repeated reports that wood products are more brittle and weaker at low temperatures.

The tests at the Forest Products Laboratory showed that there was an increase in modulus of elasticity with decrease in temperature. However, there was no tendency for the low-temperature specimen to snap, the failures appeared the same and the strength was greater at the low temperature than at room temperature. These tests were at 9% moisture content. Kollman's tests, on the other hand, were at moisture contents ranging from oven-dry to saturated. His data also show that for decreases in temperature the strength and modulus of elasticity increase, provided the moisture content remains constant (Fig. 14). However, he observed some brittleness at the high-moisture contents and low temperature. Apparently low temperatures alone do not cause wood to be brittle, but low temperatures combined with high moisture contents do.

Since packages and crates are fabricated with nails, glue and metal straps, some additional investigations at the Forest Products Laboratory may be summarized to show the probable effect of low temperatures on wood crates. Tensile tests on a glue joint between two pieces of balsa (Fig. 15) using a resorcinol glue showed that the glue was always



16. CLAMP to support shear specimen in Izod machine for impact tests at minus 70 deg. F.



17. COLD CHAMBER used for making nail-pull tests at minus 70 deg. F. Specimens were subjected to freezing and thawing cycle.

stronger than the balsa. Even though the failures were always in the balsa, the tensile strength of the combination, glue plus wood, at minus 300 deg. F. was between 63 and 97% of the strength at room temperature; that is, the strength of the wood decreased with decreases in temperature, which is the reverse of previous experience.

In a series of tests to evaluate the impact shear strength of several types of glue between maple and hickory blocks (Fig. 16), it was found that the energy to break this combination at minus 70 deg. F. was between 30 and 50% of that at room temperature.

Another example of the effect of glue at low temperatures is the toughness data on beech plywood gathered by Kollman. His results showed no change in toughness with changes in temperature, nor did data obtained on plywood at minus 70 deg. F. at the Forest Products Laboratory.

Nails are the most common means of fastening, so what is the effect of cold temperatures on a nail joint?

Nail-withdrawal tests were conducted on 2-by-2-by-8-in. white pine and southern yellow pine, and 1-by-2-by-7-in. sweetgum with seven-penny (0.098-in. diameter) cement-coated sinker nails driven to a depth of 1½ inches. The results showed that the resistance of wood to withdrawal of nails at minus 70 deg. F. was 10% greater than that at room temperature (Fig. 17). However, when the specimens were subjected to one cycle of freezing and thawing, the

room-temperature resistance to withdrawal was down 10%.

Fig. 18 shows a comparison of the values of the coefficient of thermal expansion for several materials. Note that there is considerable difference between the values of wood in the longitudinal and radial directions, and that the value for iron is between these two. It is not surprising that there is some reduction in strength during a freezing and thawing cycle. In addition, shrinking and swelling caused by moisture changes might tend to loosen fastenings, such as nails and strappings, because the holding characteristic of the wood around the metal would be weakened. However, the cold temperatures have a strengthening effect on solid wood alone, so the net result is that the resistance of wood to withdrawal of nails at cold temperatures is about the same as at room temperatures.

Tests and observations of wood and wooden crates in the Arctic regions confirm the laboratory tests of the wooden components. Atmospheric conditions in the Arctic did not cause abnormal losses in strength of wood or serviceability of wood containers. Drop tests of containers at room and subnormal temperatures showed about the same amount of damage at each temperature. The force required to remove the nails was the same at each temperature. The strength of boards was about the same at each temperature; however, there appeared to be sharper breaks with less splintering at temperatures below freezing.

This should not be mistaken as a weakness or loss in strength due to low temperature.

Summary

In summary, then, wood is generally stronger at lower temperatures—from 1½ to 3½ times as strong, depending upon the strength property involved. This conforms to the general law that as the temperature goes down, the resistance to form changes of solid or liquids increases.

In practical applications of wood and wood products many other factors, such as moisture content, imperfections and fastenings, must be considered along with the effect of temperature. In general, the increase in strength due to exposure to subnormal temperature tends to offset strength losses caused by these other factors and the product as a whole does not appreciably lose strength as a result of subnormal temperatures.

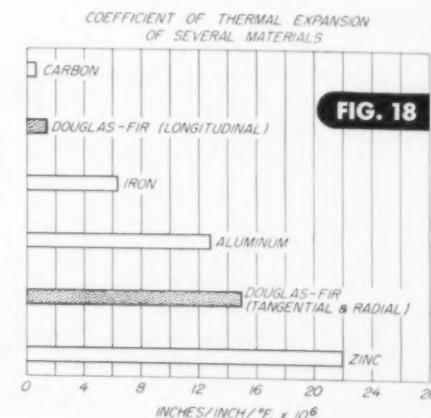


FIG. 18

Questions & Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Plastic film as a bread wrap

QUESTION: Do you consider any plastic film suitable as a bread wrapper? We print and convert plastic films and we would like to adapt some of our films to baked goods.

ANSWER: There are several reasons why fresh bread is one of the most difficult foods to attempt to change packaging-wise. First is the problem of making a wrapper that has controllable moistureproofness, yet is capable of operation on a high-speed heat-sealing machine. Fresh bread has a relatively high moisture content and the loss of this moisture induces staleness and physical changes which make the bread unsalable. The wrapper must prevent a rapid loss of moisture, but must not be so moisture-proof as to cause condensation of water on the surface of the wrapper or on the bread. This can cause undue mold growth on the bread and fogginess if the wrap is transparent.

An ideal bread wrapper is one that is durable and strongly sealed to present a good appearance and stay in place during shipping and handling in self-service stores. However, the wrapper must also be easy to remove. It would appear that a low tear strength and a peelable seal best meet these requirements. Since many plastic films are difficult to tear easily and tend to make strong welded seals, it would require some ingenuity to make them into acceptable wrappers.

Presuming that a plastic film could be so modified and applied as to meet these requirements, then the issue becomes one of cost. Bread is a low-cost commodity, with sharp competition existing between makers and brands. Therefore, the cost of a wrapper must be kept as low as possible and yet meet the machine, handling, preservation, merchandising and use requirements. The matter of cost has limited the number of materials that have been used as bread wrappers.

The foregoing statements apply mainly to the standard white loaf of bread. Many bakers have specialty breads of many types and other baked goods that require special wrappers and these products can carry higher-cost packaging.

There is interest in a wrapper that would increase the shelf life of white bread. However, you should appreciate that much basic research has been done in this field, both by the producers of the product and by the producers of cellophane, waxed paper and other packaging materials.

This does not indicate that an improved bread wrapper cannot be made which will find a large market, but you should understand the magnitude of the task before you attempt to enter this field with a plastic-film bread wrap.

Softening wet-strength kraft

QUESTION: We are using a wet-strength kraft paper as a wrapper for one of our products. The wrapper does an acceptable job except for the fact that it is so stiff it does not run well on the wrapping machine. We have tried several types of wet-strength kraft, but there is little choice between them. How can we keep a high level of wet strength and yet get a paper that is soft enough to form and fold on our wrapping machine?

ANSWER: It is possible to add plasticizers such as glycerine to many types of paper to improve the softness of the paper. This treatment is very effective in the case of normal papers, but does not always achieve results with wet-strength kraft or similar papers. When enough plasticizer is used to soften the paper, there is some loss in wet strength.

One answer to your problem would be to try parchment paper, which can be made quite soft and yet retain its wet strength. Parchment paper is available in many weights and grades

and is widely used as a butter wrapper.

Another answer might be to pass the paper through a steam box before it enters the wrapping machine. The addition of both heat and a controlled amount of moisture from the steam could soften a wet-strength kraft and improve its machinability. However, you must be sure that the paper does not get saturated with water, which would reduce the strength of the paper and might be absorbed into the product.

Labeling plastic containers

QUESTION: We are using a molded styrene jar with a snap-on polyethylene cover. We find that none of our usual label adhesives can be used to apply labels to either the jar or the cover. How can we apply paper labels to these plastic surfaces?

ANSWER: There are special formulations of resinous adhesives that will adhere paper to many kinds of plastics. Your adhesive suppliers can submit samples that will be best adapted to your glue applicator, type of paper, etc. However, it is suggested that you try these adhesives on the polystyrene jar, since this resin is more receptive to adhesion than is polyethylene.

You should also contact the suppliers of the molded styrene jars, since they may be able to suggest suitable adhesives or supply pre-printed or decorated jars.

The best answer to the problem of applying labels to many kinds of plastics parts is to use labels with a thermoplastic or pressure-sensitive coating on the reverse side. There are many combinations of materials ranging from transparent films to metallic foils that can be neatly and easily applied either by hand or automatically. Such labels, if properly selected and tested, can be expected to be durable and adhere well under a wide range of storage and use conditions.

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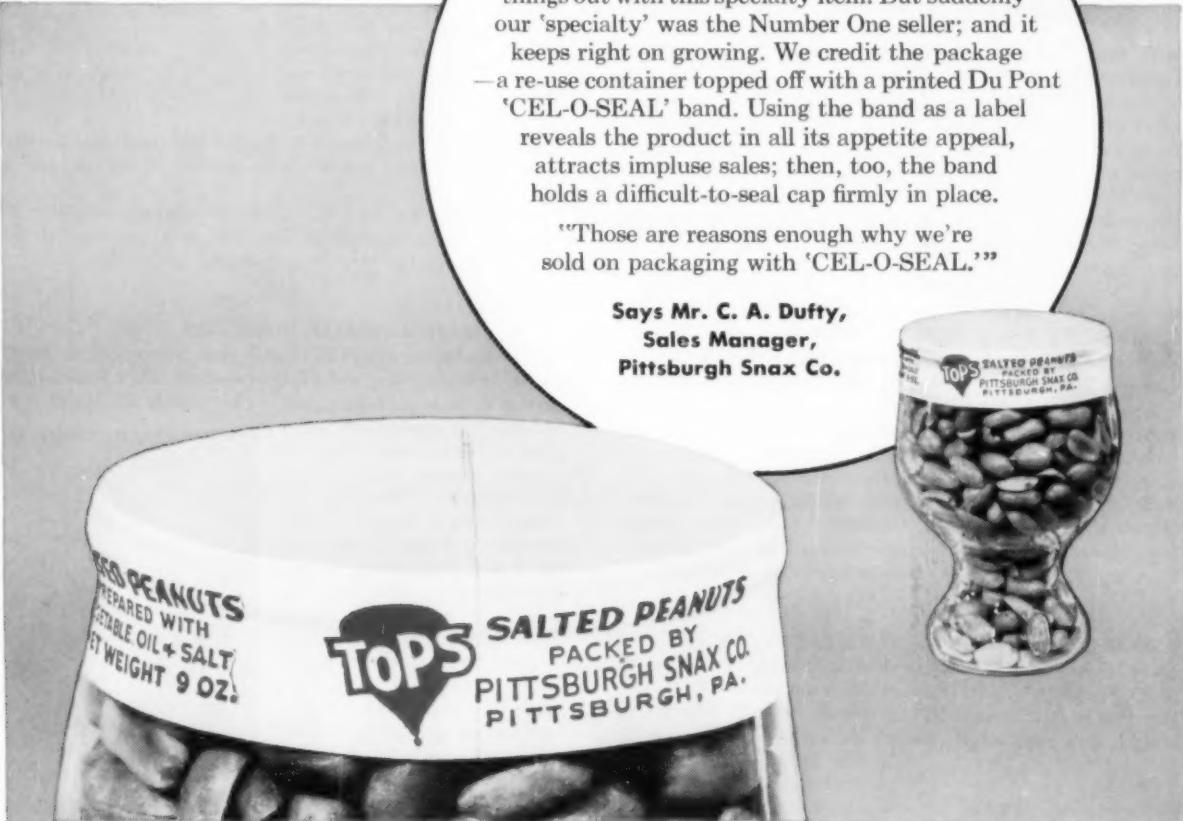
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bands

"When we put peanuts packed in glass tumblers in our regular line of Pittsburgh Snax, the idea was merely to round things out with this specialty item. But suddenly our 'specialty' was the Number One seller; and it keeps right on growing. We credit the package—a re-use container topped off with a printed Du Pont 'CEL-O-SEAL' band. Using the band as a label reveals the product in all its appetite appeal, attracts impulse sales; then, too, the band holds a difficult-to-seal cap firmly in place.

"Those are reasons enough why we're sold on packaging with 'CEL-O-SEAL.'"

Says **Mr. C. A. Dufty,**
Sales Manager,
Pittsburgh Snax Co.



EYE-CATCHING. Du Pont "Cel-O-Seal" bands can give you a self-selling package, too! These colorful bands, printed with your brand name or sales message, can be an attractive label or secondary closure—or both. Investigate the extra-profit possibilities of "Cel-O-Seal" on your package.

FREE PACKAGING SERVICE: See what Du Pont "Cel-O-Seal" does for your products. Send in your package. Our packaging experts will band it, make recommendations, return it for your inspection. Write: "Cel-O-Seal" Section, E. I. du Pont de Nemours & Co. (Inc.), 9529-A Nemours Bldg., Wilmington 98, Delaware.

"Cel-O-Seal" cellulose bands are also sold by Armstrong Cork Co., Lancaster, Pa., and on the West Coast by I. F. Schnier Co., San Francisco, Calif.

DU PONT **CEL-O-SEAL BANDS**

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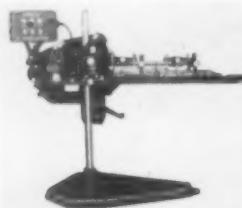
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Equipment and materials

A NEW AUTOMATIC ROTARY BAG SEALER

that fits the bag snugly around the contents and straightens the package before sealing it has been announced by Amesco Packaging Machinery, Inc., 31-31 48th Ave., Long Island City 1, N. Y. This is accomplished by means of an exclusive feed-in guide and may be done either with a folded or unfolded seal.

A 12-in. pre-heater channel allows thorough heat penetration for perfect seals, according to the company. Standard sealing rollers for cellophane apply a $\frac{1}{8}$ -in.-wide knurl-bead crimp seal with the bead impression running horizontally through the center of the seal. The knurl-bead impression is said to provide a double seal for maximum strength, eliminating pinpoints or other damage to the material. The front sealing roller floats, for automatic equalization of sealing pressure on varying thicknesses of material, such as encountered in gusset and duplex bags. Heat, pressure and time are automatically controlled and the sealing head is fully adjustable through a 15-in. vertical range. Standard sealing speed is reported at 480 lineal inches per minute.

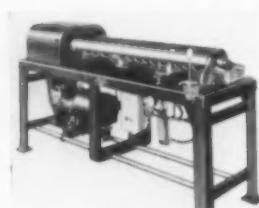


SHRINKABLE POLYETHYLENE FILM

has been announced by the Durethene Corp., 1859 S. 55 Ave., Chicago 50. This new Durethene shrinkable polyethylene film is reported to shrink down as much as 60% of the original square area, yet retain all of its original desirable properties such as high tear strength and low moisture permeability. Packers desiring to use this new film for the shrink packaging of food-stuffs, the supplier points out, must review the patents of the Dewey & Almy Chemical Co., Cambridge, Mass., on the shrinking process. Samples of this new material may be obtained from any of the company's offices or sales representatives.

A NEW SEMI-AUTOMATIC TUBE RECUTTER

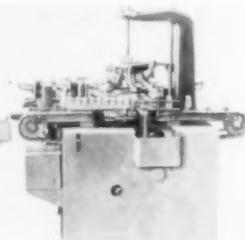
designed for faster low-cost production is being offered by the M. D. Knowlton Co., 28 Industrial St., Rochester 14, N. Y. This Powermatic tube recutter handles a wide range of materials of variable diameters, lengths and ply thicknesses. Tubes up to 52 in. long and 8 in. inside diameter and with wall thickness up to $\frac{1}{2}$ in. can be handled on the machine. The smallest inside diameter tube it will cut is $1\frac{1}{8}$ in. The unit can make up to 45 cuts at one time, depending upon the type of material, size of tube and wall thickness. Variable mandrel speed is from 280 to 845



rpm. Disk-type cutters are power driven and varying speed is controlled by air power. The inside diameter of the tube to be cut only has to approximate closely the size of the mandrel. This permits maximum speed in loading and unloading. The machine can be adjusted for every type of cut and several cutting set-ups can be made on the machine at one time, the supplier reports. When changing from one set-up to the other, it is only necessary to change the stop collar position. The new streamlined machine is powered by a 3 h.p. unit and can be set up anywhere without being bolted down. Its dimensions are 25 in. in width by 84 in. long by 42 in. high.

A NEW AUTOMATIC LABELER FOR SHORT RUNS

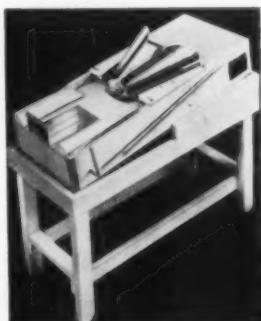
known as the Pony Express, recently introduced by the New Jersey Machine Corp., 16 St. & Willow Ave., Hoboken, N. J., is reported to operate somewhat faster than the company's Pony Labelrite and to eliminate entirely the need for an operator. The new machine uses the precision labeling principle that handles the label through suction to provide positive removal of each label from the label hopper and to minimize the attention required of the glue, plus the twin roller micro-controlled glue system which coats each label with an over-all coating of a thin film of adhesive. The new unit is fully automatic, yet is said to be as versatile as the company's semi-automatic units and almost as flexible. The new machine can handle odd shapes, put labels in recesses or on concave or convex surfaces.



Change-over for label size is said to take approximately 20 minutes, making it practical for short runs. Capacity of the machine is reported to be 70 per minute.

A NEW SEMI-AUTOMATIC PACKAGER

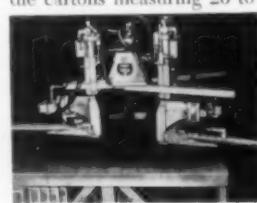
for pre-packaging of soft and hard goods is reported to greatly speed up bag-opening and filling operations, effect considerable savings in labor packaging costs, make possible loading of merchandise into smaller, more compact and less costly bags and simplify opening and loading of hard-to-open-and-fill bags of certain film extrusions (polyethylene and Pliofilm). Made by the Errich International Corp., 286 Fifth Ave., New York, and called the Speedy Bag Packager, the machine is reported to be low in price and easy to operate. It opens the bag through assistance of ratio air pressure and makes possible the easy loading of product into the bags.



All types of bags in widths ranging from 4 to 18 in. can be handled on the machine. Many bags, such as flap or lid type, open automatically. The machine requires only about 4 sq. ft. of space and weighs approximately 35 lbs.

A NEW AUTOMATIC STAPLER

designed to staple hinged or unhinged lids on octagon-shaped cartons which have open square centers is available from the International Staple & Machine Co., 809 E. Herrin St., Herrin, Ill. The new Model OTC automatic stapling machine will handle cartons measuring 26 to 54 in. across the outside flats, with 6- to 20-in. square inside openings and varying in height from $\frac{1}{2}$ to 2 in. Change-over time from one size of carton to another should not exceed two minutes and stapling time with this new unit can be drastically reduced on most applications, accord-



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• FLEXOGRAPHIC PLATE ROLLS

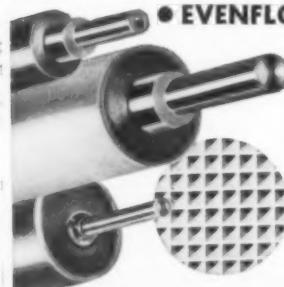
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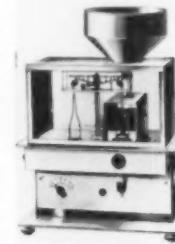
STEEL
GEARS
Pamarco precision-
cut gears insure
accurate register.
Specify them when
ordering rolls.

Equipment and materials

ing to the supplier. The machine is equipped with three adjustable HASO stapling heads. Each head has a warning bell to indicate the need for staple reloading. The staple pattern for the heads is staggered to eliminate as many stops and indexing operations as possible. After each stapling operation, the indexing table automatically revolves to the next stapling station until the closure is completed.

A NEW UNIVERSAL FILLING MACHINE

that will automatically net weigh and dispense into containers any non-liquid product that will pass through a hopper has been announced by the National Instrument Co., 5005 Queensbury Ave., Baltimore 15, Md. This new Filamatique machine will handle materials as divergent as powders, tea, tacks, tablets, seeds and candies with equal ease, it is reported. There are no stirrers or agitators of any kind and no mechanical cut-off to crush or damage articles being dispensed. A vibrating-type feeder is said to insure accurate dispensing, even with hygroscopic and fatty non-free-flowing powders. Accuracy of fill is reported at $\frac{1}{2}$ to 1%. Models are available to cover a range of from 0.003 oz. to 5% lbs. per fill. The machine, which is simple to operate, can be handled by inexperienced personnel. Filling speed is variable from 600 to 2,000 fills per hr., depending on the type of material and weight of fill. The delivery hopper is easily interchanged to suit any type of package, according to the company.



A SPRAY-ON, PEEL-OFF PLASTIC PACKAGE

announced by Murray Products, Inc., 12,400 Crossburn Ave., Cleveland 11, Ohio, and designated as "Peel-Kote" is reported to be especially suitable for protective packaging of highly polished industrial parts and products, hardware items, medical equipment, kitchen cutlery, electrical components, giftwares, metal furniture, etc. The coating is said to be easy to apply, easy to remove and can be furnished in a wide range of colors as well as clear. According to the company, Peel-Kote has a high degree of elasticity, high resistance to abrasion and when dry will not support combustion. It is normally sprayed, but special formulations can be supplied for dipping. It is immune to attack of most corrosives, according to the supplier, and can be stored indefinitely without being undesirably affected. The material can be left on during final installation of some products to give maximum protection up to the time of actual use.

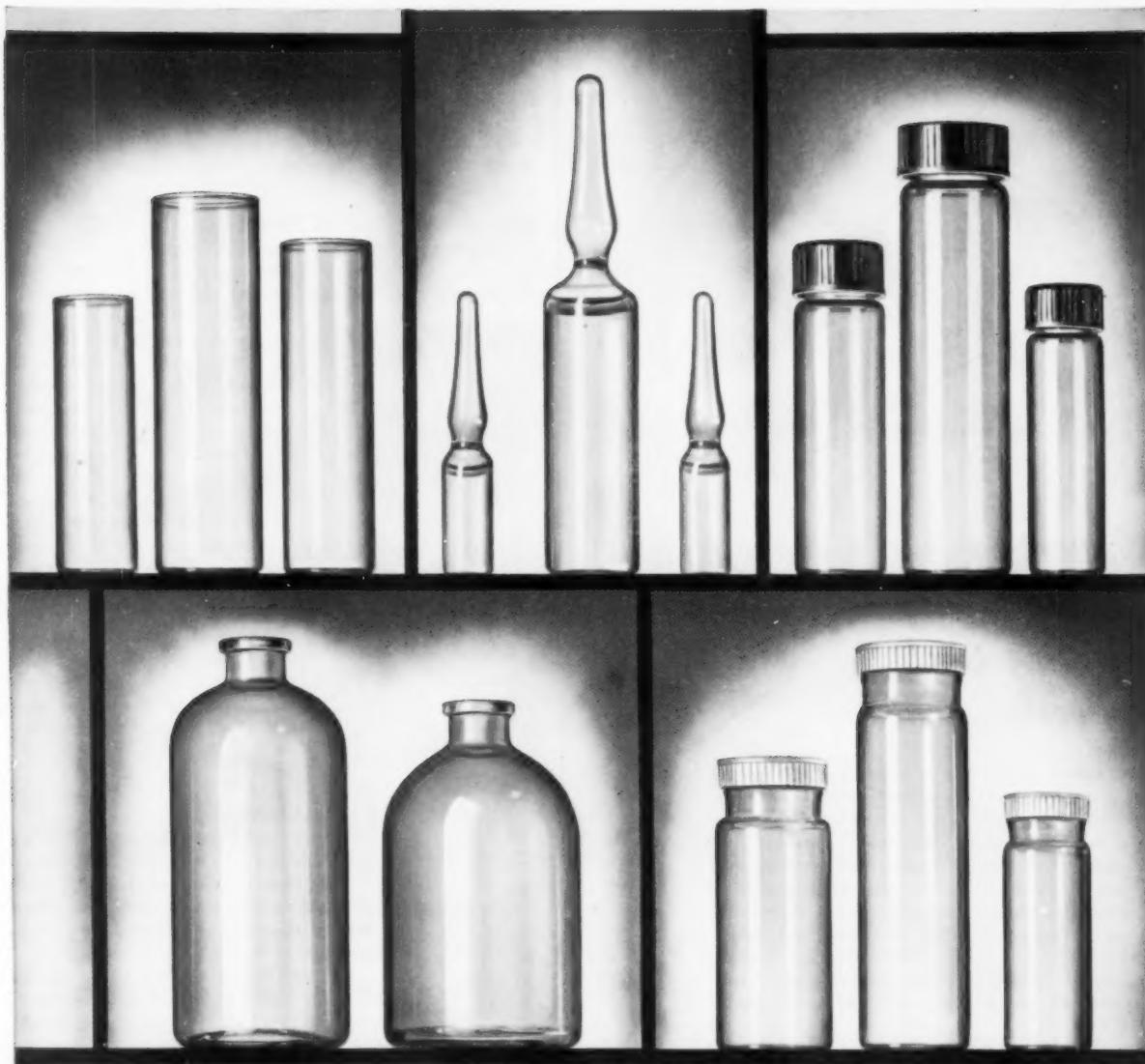
A NEW ELECTRONIC COUNTING UNIT

known as the Post Model F-1, announced by the Post Machinery Co.'s Electronic Products Division, Beverly, Mass., is designed to count continually at a speed of two to three per second and during sudden bursts of speed will count up to seven objects per second.



According to the supplier, any Post photohead can be used and line voltages from 100-120 will operate the new Model F-1. If desired, the counter can be located as far away as 100 ft. from the photohead. The photohead can be used in highly confined areas and the counter can be mounted in plain view on the production machine. This new low-cost, no-

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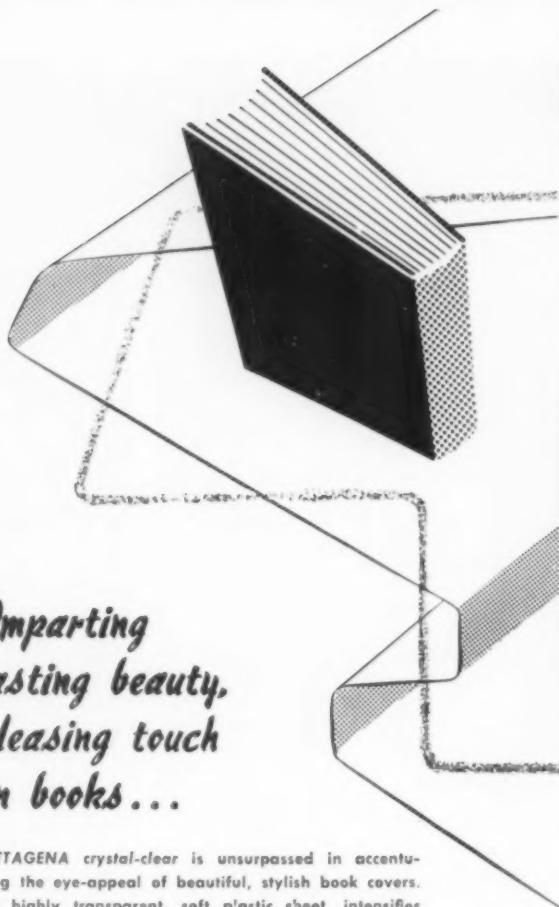
prietary products, fancy food items, spices and advertising novelties.

Can the greatest knowledge-in-glass packaging available anywhere help give your product the competitive edge? Find out by writing Kimble Glass Company, subsidiary of Owens-Illinois, Toledo 1, Ohio.

*COLOR-BREAK is a trade mark of the Kimble Glass Company, subsidiary of Owens-Illinois

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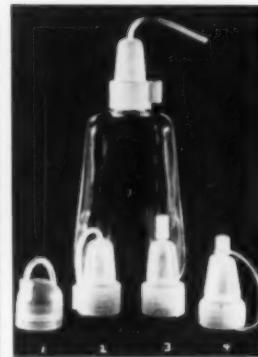
ANORGANA G.M.B.H. GENDORF/OBB.
GERMANY

Equipment and materials

maintenance counter is provided with an 8-ft. length of cord from counter to photohead and longer cords can be provided on request.

FOUR POLYETHYLENE DISPENSER CLOSURES

primarily for use on glass bottles have been developed by Berman Bros., Inc., 1501 S. Laflin St., Chicago 8. The mono-dropper (No. 1 in the accompanying photo) is a one-piece unit designed for packaging nose drops; the polyethylene tube can be inserted into the nostrils for dispensing. No. 2 is a modification in which the tube comes out of the center of the top of the lengthened squeeze area and has a bellows action for easier squeezing. No. 3 comes with the tube cut off about $\frac{1}{4}$ in. above the squeeze area, with the tube receptacle removed from the side of the closure and used as a cap, making it a two-piece unit. No. 4 has a larger tube opening for use in dispensing heavier liquids such as hand lotions, liquid cleansing creams, etc.; here the small cap covering the tube is attached to the closure by a strong thread of polyethylene so it will not be lost during use. All of these dispensers are patented.



such as hand lotions, liquid cleansing creams, etc.; here the small cap covering the tube is attached to the closure by a strong thread of polyethylene so it will not be lost during use. All of these dispensers are patented.

A NEW BAG-FILLING MACHINE



being offered by the St. Regis Paper Co., 230 Park Ave., New York 17, is reported to have the advantages of clean operation, potential bag-size saving, weight accuracy, low maintenance cost and versatile production.

The new machine utilizes a new concept of filling and weighing material in multi-wall paper valve bags, according to the company. This principle, termed fluidization, reportedly provides an additional means of packing such hard-to-pack materials as powdery and granular products. St. Regis is the exclusive sales and service representative of the Food Machinery & Chemical Corp., originator and manufacturer of the Fluopacker filling machine.

A NEW COATED SHEET FOR MULTIWALL BAGS

developed by Arkell & Smiths, 1000 Mill St., Canajoharie, N. Y. combines polyethylene and wax. The new product, called Poly-Kote, will be incorporated into multiwall bags to sell for less than bags made with straight polyethylene, the company reports. Tests run by Arkell & Smiths are said to show that the new Poly-Kote is equally acid and alkali resistant as straight polyethylene and that it is suitable for packaging hygroscopic materials.

A NEW CORRUGATED SHIPPING CONTAINER

developed by The Flintkote Co., 30 Rockefeller Pl., New York 20, is reported to combine low cost and structural soundness with a simple, easy-opening design. Heart of the new Open-Eze container is an arrangement of perforations and tear slots in the top flaps of a standard corrugated shipping case. Slight

Gummed crepe paper or lollipop wraps are no sticky problem for the BECK

SHEET CUTTER



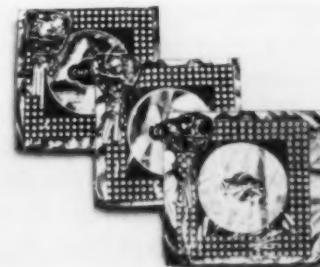
are you really stuck?

• Charms and Dennison were . . . but both solved their sticky problems with Beck Automatic Roll Sheet Cutters . . . one cutting candy wrappers to close printed register . . . the other cutting gummed crepe paper.

In both cases, the Beck Automatic Roll Sheet Cutter does its work smoothly . . . economically . . . quickly. And it can do that for you. It reduced cutting costs and speeds up production. Its many attachments enable the Beck engineers to "tailor" it to your particular needs.

For more information WRITE:

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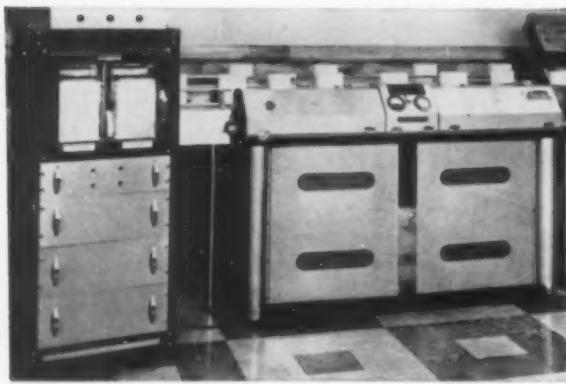


CHARMS, INC., Bloomfield, N. J., cut their own cellophane to register on their Beck Sheeter.



A small sample of the various materials cut by DENNISON MFG. CO., Framingham, Mass., on their Beck Sheeters.

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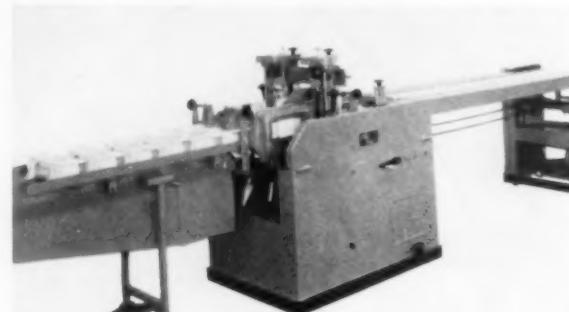
City Zone State

Equipment and materials

pressure and a gentle pull on the flaps snaps out the top section of the box quickly and cleanly. With its off-centered slotting and scientifically positioned perforations, this new container, on which patents are pending, is reported to have satisfactorily passed a wide variety of tests at independent laboratories.

A NEW CARTON GLUE-SEALING MACHINE

known as the Model 3901B, announced by the Container Equipment Corp., 78 Locust Ave., Bloomfield 2, N. J., is reported to enable as much as a 100% increase in production over previous models. Vertical glue wheels apply glue in any



desired pattern to any or all flaps of the carton. Uniform application of glue is said to assure a neater, cleaner seal, and maintenance and clean-up are speeded by the ease of removal of glue rollers and scrapers. Like other Ceco machines, this new model requires only a simple adjustment to handle cartons in a wide range of different sizes and shapes. Change-over may be made by unskilled operators in less than three minutes, the company reports. The machine will handle gluing of the "meeting outer flaps" type of carton as well as full overlapping and partial overlapping outer flaps. Variable speed controls adjust the machine to production requirements. The new vertical gluing method is also available on the company's Ceco Models 40 and 45 cartoners.

A NEW CONVEYOR-LINE DEVICE

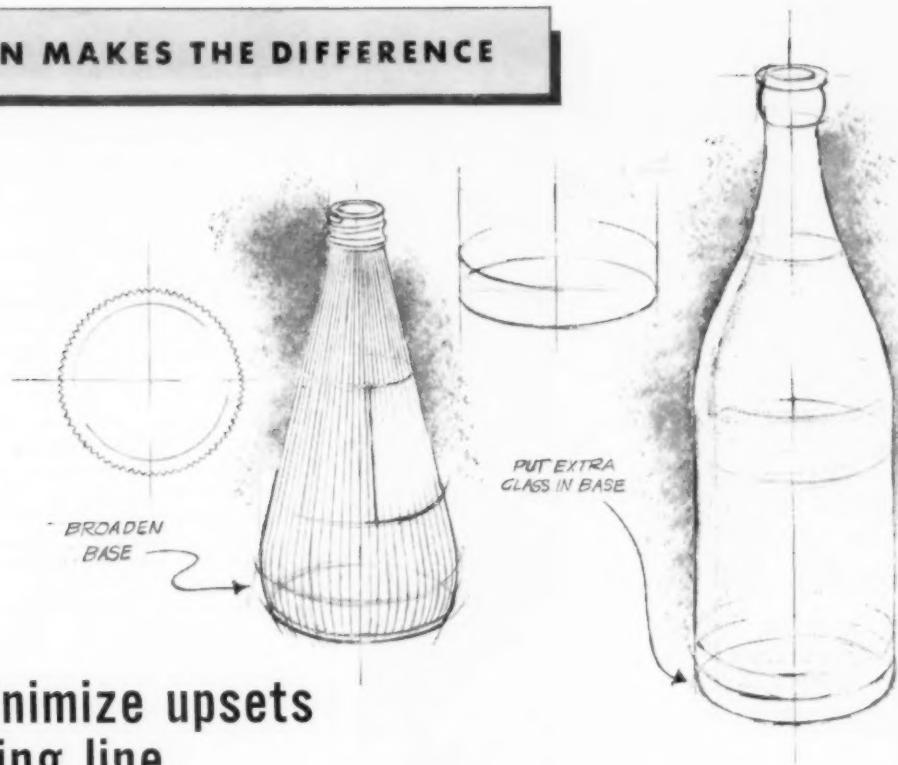
that enables feeding commodities from two conveyor lines into one line without interference has been announced by the Standard Conveyor Co., North St. Paul 9, Minn. The unit known as the "E-Z-Merger," can be used at various converging angles. Arm position can be changed in the field for use on parallel conveyor lines, various angle converging units and even right-angle transfers, using belts, live rollers or gravity conveyors. It handles commodities weighing from 2 lbs. on up. The device requires a space of about 10 in. in diameter and is about 4 in. high. It can be raised or lowered to suit the height of various commodities and arm length can be easily changed in the field by addition of a "flat" on the arms provided. Its design prevents two boxes from locking if they contact the arms at the same time.



A SPECIAL ELECTRIC CONTROL SYSTEM

incorporating a new-type electric brake has been developed for high-speed packaging machines by the Warner Electric Brake & Clutch Co., Beloit, Wis. The new control system, which is used on the Campbell Wrap machine manufactured by the

DESIGN MAKES THE DIFFERENCE



How to minimize upsets on the filling line

There are several ways of building stability into a container . . . some of them quite simple. The problem comes in working them into the design without sacrificing other features that would affect the container's looks or performance.

We've shown here four basic ways of gaining stability. If you're having trouble with upsets on the filling line, our package designers will be glad to study your

package and suggest ways for licking the problem.

Then, too, there are many other jobs good package design can do . . . such as helping the package look larger or giving it a handy re-use. One of these may be just what you're looking for. For more details, just call your nearest Armstrong office or write Armstrong Cork Company, Glass and Closure Division, 5409 Crystal Street, Lancaster, Penna.



Armstrong's Glass Containers

glass that performs . . . packages that sell



PACKAGING that SAFEGUARDS

Forty-nine years ago Kennedy's single responsibility was to safeguard product quality through protective dimensional packaging.

- or SELLS

Then came the need for "sell" in packaging, and Kennedy met that challenge, too. Today packaging is a combination of both "protection" and "sell" in the fullest sense.

- or BOTH

And today, Kennedy's mile-long production line of men and machines is constantly at work turning out flexible material packages of paper, plastic and foil that protect while they sell . . . the products of industry.

But don't take our word . . . take our product . . . see for yourself why Kennedy has been a packaging leader for nearly half a century.

Kennedy
CAR LINER AND BAG CO., INC.

SHELBYVILLE, INDIANA

Fabricators of bags, liners, covers, shrouds and component parts of papers, plastics and foils.

NEW YORK • DETROIT • CLEVELAND
SAN FRANCISCO • PORTLAND • BUFFALO
CHATTANOOGA • ATLANTA • CHICAGO
DENVER • SEATTLE • LOS ANGELES
JACKSONVILLE • PHILADELPHIA

Send information regarding Kennedy packaging for industry.

Equipment and materials

Hudson Sharp Machine Co., Green Bay, Wis., enables wrapping up to 130 units of any size or shape per minute. On standard-sized packages, the machine can wrap in excess of 150 units per minute, it is reported.

DEEP-COMPARTMENTED ALUMINUM FOIL TRAYS

that are precision formed, announced by Phoenix Industries, Inc., 400 W. North St., Indianapolis, Ind., follow through on a design which has been used primarily for frozen dinners. This Foil Master tray is reported to provide many economies for all food processors.



Pure aluminum foil fabrication eliminates costly washing operations heretofore necessary in the use of heavy sheet aluminum trays. The light-weight construction makes handling in the processing kitchens easier and a washable, re-use platter for the consumer. The new tray measures 9 1/2 by 7 3/4 in. and is 3/8-in. deep, with full partitions the entire depth of the platter.

A NEW BAG-SEALING DISPENSER

for pressure-sensitive tape to make pre-packaging of vegetables and fruit easier has been announced by the Minnesota Mining & Mfg. Co., 900 Fauquier St., St. Paul 6, Minn. The new Model P-35 "Scotch" brand dispenser is designed for sealing polyethylene bags containing such produce items as carrots, beets, onions, peaches, pears, etc., with "Scotch" brand paper



tapes Nos. 246 and 250. It accommodates 60-yr. rolls of 3/8- or 5/8-in.-wide tape and resembles regular portable tape dispensers. In use, the neck of the filled bag is given a quarter twist, slid down into the sealing slot, lifted out and pulled forward around the end of the dispenser, where the tape is cut to exact

length—about 1 1/2 in. per bag. Movable jaws crimp the tape securely around the bag neck and bring the tape surfaces together. About 1,240 bags can be sealed with a single roll of tape.

The sealer measures 10 in. long by 2 1/2 in. wide by 6 in. high, with tape on the removable core.

PRINTING ON CURVED SURFACES

in one or two colors is possible with a new machine introduced by the Markem Machine Co., Keene 45, N. H. Decorative designs, trademarks, etc., can be printed by this rotary printing mechanism, which uses a flexible printing mat, with good color

registration on jars, bottles, tumblers, cups, etc., according to the supplier. The new Markem 67A machine is manually operated and, when object shape permits, may be equipped with automatic feed and ejection mechanisms. Production rates depend mainly on the operator's ability and range from 20 to 60 objects per minute. Maximum imprint size is 4 in. top to bottom and 15 in. around the circumference. The machine will handle articles as large as 12 in. in diameter. For



the imprint to occupy the entire circumference, however, the diameter of the article cannot exceed 5 in. The machine occupies 34 by 26 in. of floor space and is 55 in. high.

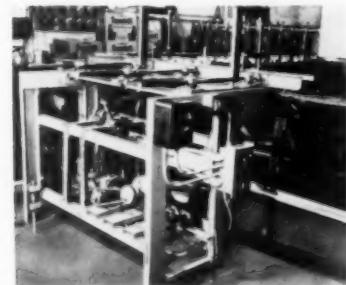
A NEW 38-MM. MILK-BOTTLE CLOSURE

that is reported to be rugged and inexpensive, together with machinery for its application, has been announced by the Standard Packaging Corp., Standard Closure Division, 551 Fifth Ave., New York 17, following extensive market tests in Louisville, Ky. According to the Model Farms Dairy, where the new 38 Superhood closure has been in use for a six-month test, it has simplified the capping operation because of in-plant dating and has gained excellent consumer acceptance because the closure is easy to remove and reseal. The new closure is made of laminated aluminum foil with paper liner having crimped edges and is printed in assorted colors for product identification.

The new closures are applied by the company's new 38 Superhood equipment, which permits application to the bottle at any desired pressure by means of segmented heads with rubber squeezing rings. Standard Packaging Corp. leases or sells this equipment to users.

A NEW BROAD BELT INFEED UNIT

developed by the Island Equipment Corp., 27-01 Bridge Plaza N., Long Island City 1, N. Y., will handle any straight-sided bottle, jar, can or paperboard container, filled or empty, and will transfer them from a straight single line into rows the width of which is equivalent to any number of containers from two to the desired number. It is adjustable to meet changes in speed of transfer as well as size and numbers of cans per row and will accurately count and feed each counted row onto a broad belt conveyor. Typical uses are for feeding wide-belt conveyors, glass lehrs, jar coolers, pasteurizers, lag conveyors and storage lines. It may also be used to push a row of containers onto a parallel conveyor for feeding straight-line fillers or case packers. Standard unit will feed a 4-ft. belt, but can be made to feed a minimum belt width of 2 ft. or a maximum belt width of 6 ft.



for feeding wide-belt conveyors, glass lehrs, jar coolers, pasteurizers, lag conveyors and storage lines. It may also be used to push a row of containers onto a parallel conveyor for feeding straight-line fillers or case packers. Standard unit will feed a 4-ft. belt, but can be made to feed a minimum belt width of 2 ft. or a maximum belt width of 6 ft.

A NEW PHOTO COMPOSITION UNIT

that can produce hand lettering and type for packaging in a matter of minutes has been announced by the Filmotype Corp., 60 W. Superior St., Chicago 10. Featur-

ing simple one-finger operation and razor-sharp black proofs, this new Filmotype unit offers a library of more than 700 styles and sizes. Standard master fonts, which may be re-used any number of times, contain upper and lower cases of many faces on all weights and condensities.

Barely larger in over-all size than a standard typewriter, it provides package designers with hand lettering and type economy costing only a few cents per design, the manufacturer reports.

COLORFUL SHIPPING CONTAINERS

in decorated patterns and in solid colors are being produced by the Richards Container Corp., 2700 S. 12 Ave., Broadview, Ill. These Colorcote containers are available in all conventional



WHIZ-PACKERS

FILL ANY SIZE - ANY TYPE PACKAGES

Faster - More Accurately

for DRY PRODUCT

PACKAGING: POWDERS • NUTS
• CRYSTALS • CANDY
• SEEDS • TEAS • COFFEE
• FROZEN FOODS • BEANS
• SPICES • SOUP MIXES
• PEANUTS • POPCORN ETC.

NOW Available —

**A Complete Line of WHIZ-PACKER
Automatic—Semi-Automatic, Net
Weighing and Volumetric Package
Filling Equipment and Accessories.**

Meet your production requirements with WHIZ-PACKER

Speed up your production line

**Fill any size, any type packages,
With the best of accuracies**

BENCH MODEL—One of
the many WHIZ-PACKER
Filling machines.



FLOOR MODEL

**Send product sample and package for
model recommendation, complete de-
tails and prices. No obligation of course.**

FRAZIER & SON
20-01 Industrial West • Allwood, Clifton, N. J.

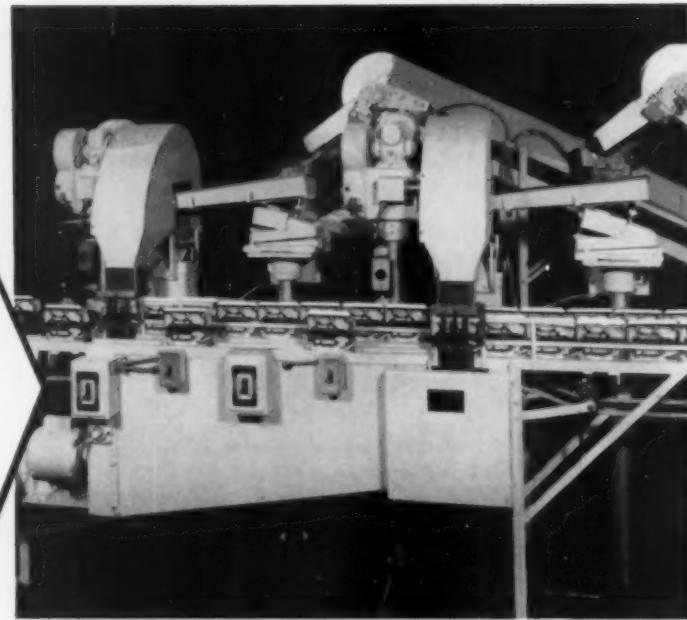
EASTERN STATES — AMSCO PACKAGING MACHINERY, INC., LONG ISLAND CITY, N. Y.
WESTERN STATES — GURNEY PACKAGING MACHINERY, INC., OAKLAND, CALIFORNIA
MIDWESTERN & SOUTHERN STATES — MILLER WRAPPING AND SEALING MACHINE CO., CHICAGO, ILLINOIS
CANADIAN — FISH SALES COMPANY, TORONTO, CANADA EXPERT — THE ESSES COMPANY, INC., NEW YORK, N. Y.

Here's the answer to another packaging question

How can toy cookies be weighed more accurately and filled into cartons at higher speeds?

This Hy-Tra-Lec weighing system provides the answer. It operates at an approximate speed of 70 cartons per minute with an accuracy previously unattainable.

Look to Wright for more accurate, high speed weighers for free flowing, dry products. Standard models available for both automatic and semi-automatic lines. Or Wright will design a special system to meet your particular requirements.



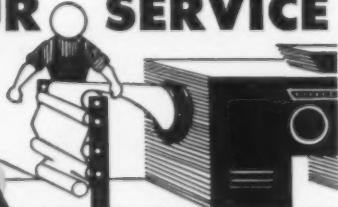
Machines for sale...Terms...Lease

WRIGHT MACHINERY COMPANY: CALVIN STREET, DURHAM, N. C.; 921 BERGEN AVENUE, JERSEY CITY, N. J.; MICHIGAN SQUARE BUILDING, 540 N. MICHIGAN AVENUE, CHICAGO, ILLINOIS. EDWIN F. DELINE COMPANY, 224 W. ALAMEDA AVENUE, DENVER 9, COLORADO. R. P. ANDERSON COMPANY: 1122 TEXAS BANK BUILDING, DALLAS 2, TEXAS; 5643 OVERBROOK LANE, HOUSTON 19, TEXAS; 925 N. SOLOMON PL., NEW ORLEANS 19, LA.

WRIGHT MACHINERY COMPANY

EST. 1893 - 500 CALVIN ST., DURHAM, N. C.  SUBSIDIARY OF THE SPERRY CORPORATION

AT YOUR SERVICE



SCIENTIFICALLY EXTRUDED SHEETS

UNIFORM IN GAUGE

Color range to suit your job thickness from .003 to .200. Our Acetate and Styrene Sheets, Rolls, and Films are suitable for

VACUUM FORMING

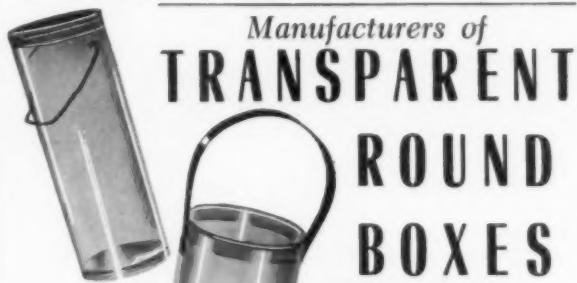
Perfect for Silk Screening. Furnished in widths from 1" to 60 inches.

Many new products are being made from our materials. We can provide technical assistance to improve your product.



JOSEPH DAVIS PLASTICS CO.

432 Schuyler Ave., Arlington, N. J.



Manufacturers of TRANSPARENT ROUND BOXES

Metal Bottoms

Cardboard Bottoms

for

- Confectionery
- Nuts
- Pencils
- Matches
- Jewelry
- Combs
- Notions
- Cosmetics
- Toys
- Underwear
- Brushes
- Booties
- Flowers
- Dolls
- Industrial Uses

Cold Stamped • Screened • Printed



Packaging Experts

AMERICAN CELLUBOX CORP

27-01 Bridge Plaza North
Long Island City, N.Y.

Equipment and materials

styles and in a new one-piece shipping container incorporating interior packing, which the company produces under the name of Richards Twimpak. One- and two-color halftone printing is used, as well as solid color printing in the usual color ranges and in silver and gold.

NEW HANDLED BAGS FOR FRESH PRODUCE

known as Handi-Toters, offered by the Continental Can Co.'s Shellmar-Betner Flexible Packaging Div., 100 E. 42 St., New York 17, are designed as grocery-store sales boosters. Of sturdy construction, the bags come in various combinations of white, black and natural heavy kraft. Their strong handles bear a surprising amount of weight, according to the supplier. These economical carriers make eye-catching displays and relieve confusion and crowding in produce sections during busy hours. Sizes available are: King (grapefruit), Jumbo (oranges), Senior (potatoes), Prep (apples), Cadet (peaches), Junior (tomatoes) and Midget (grapes).



A HAND-OPERATED CIGARETTE BANDER

to facilitate the banding of five-pack units of cigarettes has been announced by the Nashua Corp., Nashua, N. H. Five packs of cigarettes are placed on a movable metal shelf, centering the cigarettes over the bands.

The operator picks up a self-sealing band, puts it around the five packs and flips the shelf with the cigarettes over to the next position. The operator then wraps another band around the cigarettes, slides them off and the job is completed.

The company estimates that one operator can band a case of regular-size cigarettes in about 25 minutes. King-size packs, which use only one band, take from 12 to 15 minutes.



A NEW MULTIPLE PRINTER

with power conveyor and turning device that prints one, two, three, four sides and top of any carton with one, two, three, four or more marking heads has been announced by the Algene Marking Equipment Co., 232 Palisade Ave., Garfield, N. J. Any side of the carton may be printed in two colors with the addition of an extra head. This heavy-duty unit will support a continuous load up to 2,600 lbs. Hook-up can be made to any sealing machine, gravity or power conveyor or any other type of conveyance. Adjustments for different-sized cartons reportedly can be made in 10 minutes. Automatic inking by means of a capillary ink feed is said to eliminate leakage.

A NEW TYPE OF PRESSURE-SENSITIVE BAND

suitable for special packaging use and premium offers has been announced by Larido Corp., Premium Division, 381 Fourth Ave., New York 16. Two packages can be banded together economically for special price offerings. Tie-on premium offers can be banded on to one or two packages by using a pressure-sensitive paper strip printed with promotional copy



Spins on—Seals—Spins off without freezing.

Merit SEAL outsells all others because its patented construction works better.

NOW AVAILABLE IN THE FOLLOWING NEW SIZES:
38, 40 and 45 mm. Other Sizes—48, 51, 53, 58, 60, 63, 66, 70, 75, 83, 89 and 100 mm.



... CORK SPECIALTY CORP. ...

Division of
Crown Cork and Seal Co.
St. Louis 15, Missouri

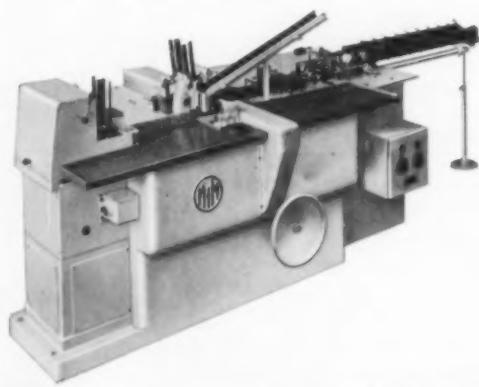


MiM-PACKAGING • HYGIENIC • ACCURATE • EYE-APPEALING • INEXPENSIVE

Cartoning Machines

Fully-automatic, for packaging various products in folding cartons. Closure by gluing, or insertion of the end flaps on both sides.

Please write for our catalogues and technical advice for your particular requirement.



(Manufactured in West Germany)



INDUSTRIE-WERKE KARLSRUHE
Aktiengesellschaft/KARLSRUHE

Equipment and materials

that can be lithographed in one to four colors. The new type of pressure-sensitive bands is reported to be efficient on production runs, involves no mess or sticky gluing. The band is held securely just by pressing.

A MULTIPLE-ACTION BAG PACKER

for packing powdered, granular, pellet and fibrous materials, which is said to eliminate the need for pre-weighing and assure tightly filled valve bags of exact uniform weight, has been announced by the E. D. Coddington Mfg. Co., 5020 N. 37 St., Milwaukee 9, Wis. This new-model Auger-matic machine has a redesigned built-in scale that includes a shaker which jolts each bag vigorously and repeatedly during the filling process. This is said not only to prevent slack-filled bags, but also to permit the use of minimum-sized valve bags at correspondingly lower cost for bags. Another feature of the new machine is a security clamp which holds the valve bag in place on the filling spout regardless of the force with which materials flow from the spout. For use with fluffy or fibrous materials, a special Feeder-matic unit with built-in positive feeding auger is available to insure free flowing of materials—even those requiring agitation—without loss of speed in packing. All the operator has to do is slip the valve over the spout and press a button to start the machine. The built-in scale shuts off the machine automatically the moment desired weight is reached, then the operator releases the security clamp, slips bag from spout, tucks in valve and the bag is ready.

TWO NEW BIN AND HOPPER VIBRATORS

announced by the Cleveland Vibrator Co., 2828 Clinton Ave., Cleveland 13, Ohio, are the 1-in. and 5-in. piston diameter Type F air vibrators. The 1-in. Type F is an extremely lightweight unit, while the 5-in. unit is a heavy-duty, long-stroke unit for larger bin applications where arching, bridging and sticking conditions are extreme. This addition brings the total number of bin vibrators available from the company to eight different sizes.

A NEW TRAY FOR PRE-PACKAGING LETTUCE

developed by the Standard Folding Trays Corp., 85 St. & 24 Ave., Jackson Heights 69, N. Y., is reported to enable low-cost packaging at the terminal level, since it allows the use of high-speed overwrapping equipment, readily obtainable from a number of manufacturers.

The rigidity of the tray, called the Tripl-Tite, makes for efficient heat sealing in the wrapping machine, yet the ends of the tray "stretch," enabling variously shaped lettuce heads to be packed. As a result, rewraps are eliminated and packing costs are held to a minimum. Both tray and cellophane overwrap cost no more than 1% to 1% cents per head of lettuce, according to the supplier.

AN AUTOMATIC GLUER AND TAPER

that automatically glues and tapes tops and bottoms of shipping containers in one pass through the machine has been announced by the Clybourn Machine Corp., 6479 N. Avondale

GET BOTH STEEL AND FIBRE DRUMS QUICKLY-FROM ONE SOURCE-RHEEM

RHEEM STEEL CONTAINERS ARE MADE IN SEVEN STRATEGIC LOCATIONS



Rheem Fibre Drums are being manufactured in four of these plants. Production lines are scheduled for installation in other plants soon.

"FAMILY IDENTIFICATION"



30-gal. Rheem Fibre-Metal Drum

RHEEM MANUFACTURING COMPANY

Chicago 29, Illinois • New Orleans 20, Louisiana • Seattle, Washington
Houston 20, Texas • New York 22, New York • South Gate, California
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NOW, MORE THAN EVER BEFORE, YOU CAN RELY ON
FOR ALL YOUR SHIPPING CONTAINER REQUIREMENTS

RHEEM ANNOUNCES A COMPLETE LINE OF FIBRE DRUMS TO SUPPLEMENT ITS STEEL SHIPPING AND EQUIPMENT CONTAINER LINES

To supplement its line of steel shipping and custom equipment containers, Rheem has added a complete line of Fibre and Fibre-Metal drums. These strong, lightweight, inexpensive drums come in four types and in a wide range of sizes.

Choose the Drum that Fits Your Needs



Choose the type that best fits your needs—All-Fibre drums, or Fibre-Metal drums with either slip or friction covers or with the new, easy to install and remove Rheem-Lox ring. Only Rheem offers all these types of low-cost containers.



Choose the Size that Fits Your Needs

Choose the size that best fits your needs. Fibre drums from 1 to 32 gallons in capacity; Fibre-Metal drums from 5 to 60 gallons. There is virtually a size for every possible requirement.

MAIL COUPON IN NOW! for complete information

RHEEM MANUFACTURING COMPANY (Mail to Nearest Sales Office, Listed at Left)

We would like to have your packaging engineers come to our plant and study our shipping container problems.

Please send additional information.

NAME OF COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

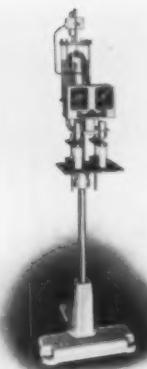
BY _____

MP-2

Equipment and materials

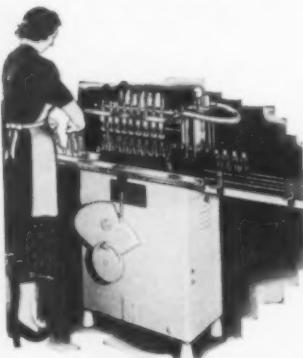
The MULTI-U-METER Handles Plastic, Odd-shaped Containers

Container guides hold any type, shape or size containers rigidly in filling position. Handles any liquid. Has automatic product supply and automatic filling control. Advanced features. Minimum floor space. Two-Head and Four-Head models. Write for Multi-U-Meter Bulletin.



**Look to U.S. for Every
Liquid Filling Requirement**

You can get better production from fillers that simplify operations. For decades, U. S. engineering has consistently improved automatic machine operations to reduce manual dexterity. Result: greater and easier production. As a policy, every moving part is built for dependability-plus. That is why U. S. machines have that "never-let-you-down" reputation which you can depend upon. Whatever your liquid filling requirements, investigate U. S. machines.



Model B-49 Straightline Vacuum Filler

handles any liquids. Quick changeover for all container sizes (AGST to gallons). For operation with or without discharge conveyor. Simple hand lever operation for multiple filling of up to 9 containers at a time, otherwise completely automatic. Filling is uniform, clean and fast. Write for Bulletin B-49.



Model B-2

Model B-2 Vacuum Filler handles any liquids; all containers ranging from AGST finishes to containers 4½" dia. Four container holding cups enable continuous filling of two containers at a time. Product supply is automatic. Portable. Ideal standby for peak loads. Write for Bulletin B-2.

Siphon Filler efficiently handles free-flowing liquids. For all container sizes including gallons. Stainless steel, no drip siphon tubes. Write for Siphon Bulletin.

U. S. BOTTLERS MACHINERY COMPANY

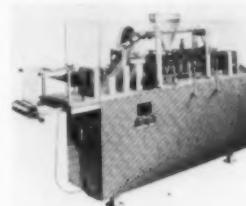
4017 North Rockwell Street • Chicago 18, Illinois

BOSTON • NEW YORK • PHILADELPHIA • HOUSTON • DALLAS • LOS ANGELES • SAN FRANCISCO • DENVER • SEATTLE • PORTLAND • PHOENIX • NEW ORLEANS • TAMPA ATLANTA • MONTREAL • TORONTO • VANCOUVER • WINNIPEG • EXPORT OFF.: TOLEDO

Ave., Chicago 31. It handles a wide range of carton sizes from 10 to 22.4 in. in length, 5.1 to 13.8 in. in width and 4.9 to 17.7 in. in height. Time required for complete adjustment for different sizes of cartons is approximately 3 minutes. Rated capacity of the machine is from four to 18 cartons per minute. Cam-operated glue rollers are adjustable to apply the right amount of glue in the exact locations desired. The taping unit holds two 1,500-ft. rolls. The machine is 16 ft., 1 in. long by 4 ft., 2 in. wide by 4 ft., 10 in. high.

A NEW BAG PACKAGING MACHINE

that differs from conventional packaging units in that it functions in a continuous straight-line operation has been introduced by Triplex Industries, Inc., Riverdale, Ill. Once the machine, known as the "Wrap-Trap," is started, the motion is uninterrupted throughout the forming, filling and sealing operations, thus eliminating the usual wear and tear caused by repeated stopping and starting, according to the supplier. The new machine reportedly handles virtually all modern heat-sealing materials such as aluminum foil, saran and polyethylene



laminations, coated papers, etc. The machine operates in clear view at table height. It measures 24 in. wide by 9 ft. long by 60 in. in over-all height. Prior to acceptance of an order, the company tests the machine in action, using samples of the material to be packaged, together with paper stock samples. A written guarantee of the rate of production is then given the purchaser.

ADHESIVE IN THE FORM OF UNSUPPORTED FILM

developed by the Bond Adhesives Co., 537 Johnson Ave., Brooklyn 37, is 0.006 in. thick. The formula is based on Pliobond adhesive, a product of Goodyear Tire & Rubber Co., Akron, Ohio. Called "Tweeze," the film is thermoplastic and will adhere with heat and pressure, according to the supplier, who reports that it can be used with efficiency on practically all surfaces, including metal, glass, wood, fabrics and all plastics except Teflon and polyethylene. The film adhesive is available in assorted colors.

CORRUGATED BOX FOR SHIPPING LIVE LOBSTERS

developed by Hinde & Dauch Paper Co., Sandusky, Ohio, is reported to solve three primary lobster-shipping problems: (1) how to keep the lobster cool and alive, (2) how to prevent brine leakage and (3) how to reduce package weight. Special characteristics of the "Live Lobster-Pak" are found not in the regular slotted box itself, but in the specialized interior packing pieces designed for it. These consist of cushioning pads for the bottom, top and all sides of the box, a pair of paraffined trays and a series of special water-absorbent pads. The package, packed with 50 lbs. of lobsters, weighs only 65 lbs. The box measures 19 by 19 by 16½ in. and is equipped with a convenient carrying handle.

A RESIN-BASED ADHESIVE

designed for use on corrugated fruit or nut cartons has been announced by Swift & Co., Adhesive Products Dept., Chicago 9. Designated as Citrus Carton Resin Adhesive, it is said to have high resistance to moisture and climatic fluctuations, and to be specially formulated to set up quickly at a rate compatible with fruit-packing operations.

MODERN PACKAGING

 THE DOW CHEMICAL COMPANY presents
a great new dramatic television program . . .

MEDIC



It's unusual to talk about a television program in this magazine, but we wanted you, our customers and friends, to hear about MEDIC first . . . we honestly believe it to be the most exciting new dramatic production in years . . .

Startling in its realism and honesty, MEDIC is based on case histories and carries the official endorsement of the Los Angeles Medical Association; produced under their technical supervision by Worthington Miner, originator of *Studio One*; created and written by *Dragnet* writer, James Moser. Don't miss the first performance September 13! The Dow Chemical Company, Midland, Michigan.

See MEDIC Monday Nights 9 to 9:30 EST, NBC-TV



Plants and people

Plax Corp., Hartford, Conn., has sold to the Westlake Plastics Co., Lenni Mills, Pa., its entire production equipment, applicable patents, etc., for extruding rods and tubes of methacrylate, polyethylene, polystyrene and fluorocarbon (KEL-F) for molding heavy-gauge sheets of polyethylene and polystyrene and all gauges of fluorocarbon (KEL-F). Plax management reports that this part of its operations has been sold to provide needed space and to permit concentration in its squeeze-bottle, extruded-film and oriented-sheet businesses. The large inventory of finished products permits uninterrupted service to customers while equipment is being transferred from Stonington, Conn., to Lenni Mills. Experienced Plax personnel have been retained by Westlake to supervise transfer of machinery and to develop volume and quality of production. **E. B. Westlake, Jr.**, president and general manager of Westlake Plastics and also of Crystal-X Corp., expects to develop further the contributions that Plax already has made to the plastics industry.

Creation of a new research and development department within the Metal Div. of **Continental Can Co.**, New York, has been announced. All metal container research and equipment engineering activities have been transferred to the new department, which will be under the direction of **Allan M. Cameron** as general manager. Mr. Cameron will be responsible to **Thomas C. Fogarty**, executive vice president of the Metal Div. Directors and staff members of the department are: **G. H. Bendix**, chemical and physical laboratories; **S. F. Flugge**, container development; **J. Simpson**, equipment development; **H. A. Hanel**, equipment standards; and **L. C. Van Hoeven**, office manager. Mr. Cameron's assistant will be **W. J. Mutschler**. **L. E. Clifcorn** will be associate director of research. The new department will be located in Continental's new research building under construction in Chicago.

Battle Creek Packaging Machines, Inc., has been selected as the new name for the **Battle Creek Bread Wrapping Machine Co.**, Battle Creek, Mich., a pioneer firm in the packaging industry. In making the change, the company feels that it not only signifies the growth of the company, but of the packaging industry as a whole. The change in name also recognizes that package machinery manufacturers and

producers of wrapping and packaging materials have made great progress in originating and producing new machines and materials to meet the demand for greater package protection and better marketing display.

W. C. Schade has been appointed executive vice president and general manager of **Ball Bros. Co., Inc.**, Muncie, Ind. Mr. Schade will be in charge of all manufacturing and sales activities for both the parent company and for the Ball subsidiaries. Mr. Schade replaces **Duncan C. Menzies**, who recently resigned as executive vice president and general manager.

Ekco Products Co., Chicago, has named **Donald S. Burns** general sales manager for the bakery, foil and pan-glazing divisions of Ekco's western region. In addition,

Mr. Burns will serve as vice president of Ekco's subsidiary, **Western Glaco Co.**, with headquarters in San Francisco. **Philip R. Laughlin** will continue as regional manager of western bakery sales for Ekco.

The Los Angeles manufacturing and warehousing of all Ekco lines has been placed under the management of the recently acquired **McClintock Mfg. Co.** The McClintock organization will continue to manufacture and sell butcher shop and supermarket equipment.

The directors of **W. R. Grace & Co.**, New York, and of **Dewey & Almy Chemical Co.**, Cambridge, Mass., have announced plans for a proposed merger which would provide Dewey & Almy shareholders with one share of W. R. Grace & Co. common stock for each share of Dewey & Almy stock. If the plan is completed, Dewey & Almy will continue to operate as an autonomous unit with no expected changes in policy or personnel.

The Ohio Boxboard Co., Rittman, Ohio, manufacturer of folding cartons and corrugated shipping containers, has acquired the **Empire Box Corp. of Illinois**, with its manufacturing plant in South Bend, Ind., and sales offices in Chicago. The company will operate as the Empire Box Corp., Div. of Ohio Boxboard Co. **J. L. Lyons**, with Empire for 30 years, will continue as general manager.

Robert Gair Co., Inc., New York, manufacturer of paperboard, folding cartons

and shipping containers, has completed a two-year, \$5,000,000 extension program at the kraft container board mill of its subsidiary, **Southern Paperboard Corp.**, Port Wentworth, Ga. Daily capacity has been increased to a maximum of 685 tons of finished paperboard, a substantial increase over the mill's original capacity.

Stanley W. Hamilton has been made manager of wood procurement at the Mechanicville mill of **West Virginia Pulp & Paper Co.**, New York. Mr. Hamilton succeeds the late **Starrett D. Huff**.

Ted Porter of Wraps, Inc., New York, and former chief of the packaging branch, USAF, now has the rank of lieutenant colonel, assigned as special project packaging officer under **Col. J. N. Sammons**, chief, Packaging & Materials Handling Div., at the Pentagon in Washington.

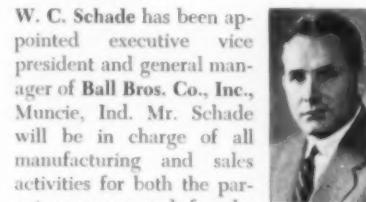
A new one story building has been completed for the art department of **Western Waxed Paper Div.**, **Crown Zellerbach Corp.**, San Leandro, Calif. The new building is adjacent to the manufacturing and laboratory facilities of the firm.

L. Suttner, 1049 St. Nicholas Ave., New York 32, has announced a contract packaging service in the perfumery and cosmetics field, with facilities for filling and capping bottles, labeling, placing bottles in corrugated lined boxes, wrapping boxes, etc.

A \$200,000 expansion program has been announced by the **Rucker Co.**, Oakland, Calif., distributors of pneumatic and fluid power systems. The program includes the construction of a new warehouse and plant building to be completed about Nov. 1.

Chase Bag Co., Chicago, has appointed **Russell F. Jagoditsch** as chief chemist and **J. W. Means** as assistant chief chemist at the company's general laboratory located at Chagrin Falls, Ohio. **Allen Daniels** succeeds Mr. Jagoditsch as head of the paper mill quality control department.

The Standard Closure Div., **Standard Packaging Corp.**, New York, manufacturer of flexible closures and equipment for the dairy and bottling industries, has appointed **Richard E. Boek** as sales representative in the territory including New



W. C.
Schade



D. S. Burns



R. F.
Jagoditsch



J. W.
Means

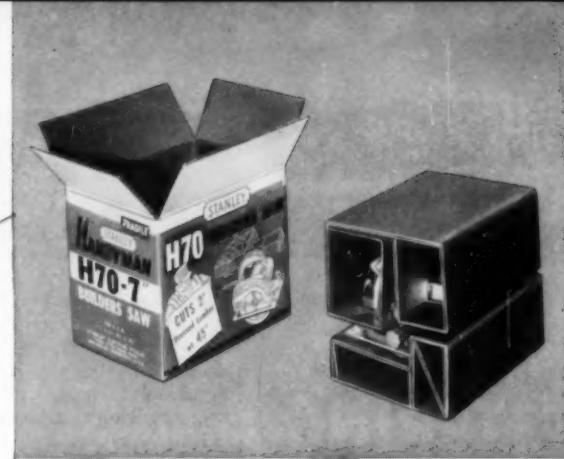
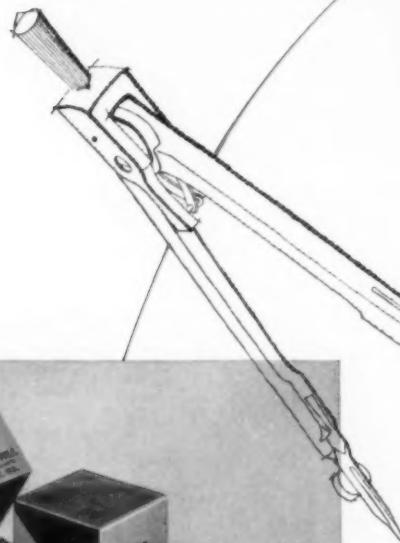


A. M.
Cameron

Creation of a new research and development department within the Metal Div. of **Continental Can Co.**, New York, has been announced. All metal container research and equipment engineering activities have been transferred to the new department, which will be under the direction of **Allan M. Cameron** as general manager. Mr. Cameron will be responsible to **Thomas C. Fogarty**, executive vice president of the Metal Div. Directors and staff members of the department are: **G. H. Bendix**, chemical and physical laboratories; **S. F. Flugge**, container development; **J. Simpson**, equipment development; **H. A. Hanel**, equipment standards; and **L. C. Van Hoeven**, office manager. Mr. Cameron's assistant will be **W. J. Mutschler**. **L. E. Clifcorn** will be associate director of research. The new department will be located in Continental's new research building under construction in Chicago.

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Plants and people

York State (except the New York metropolitan area), Eastern Pennsylvania, Delaware, the District of Columbia, Maryland and Virginia. **Chester O. Black** will replace Mr. Boek in the sales area consisting of Colorado, Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota and Wyoming.

Ralph W. Kumler has been appointed to the staff of the research laboratories of **Foster D. Snell, Inc.**, New York, as a pulp and paper consultant. Mr. Kumler will work on the chemical problems of the pulp and paper industry.

Hinde & Dauch Paper Co., Sandusky, Ohio, has appointed **Charles D. Welshenbach** as sales staff engineer. Mr. Welshenbach will direct the operation of Hinde

& Dauch package laboratories at Sandusky, Detroit, Cleveland, Chicago, St. Louis and Kansas City. From headquarters in Sandusky, he will act in an advisory capacity whenever difficult design problems are submitted to him by the sales managers of the western factories. He will also assume responsibility for matters pertaining to uniform freight classification. Replacing Mr. Welshenbach as supervisor of the Sandusky package laboratory will be **James Aust**.

St. Regis Paper Co., New York, has completed a \$5,000,000 expansion program at the St. Regis kraft center in Pensacola, Fla. The expansion program will increase the flexibility of the Pensacola kraft center so that it can produce bleached and unbleached grades of kraft paper for a variety of uses.

Hugh W. Sloan, vice president of **St. Regis Paper Co. (Canada) Ltd.**, subsidiary of St. Regis Paper Co., has been appointed to direct the company's operations. Mr. Sloan succeeds **Thomas H. Cosford**, who will continue as a director of St. Regis Paper Co. and will be available in a consulting capacity.

The Field Research Div. of the **Paper Cup & Container Institute, Inc.**, has moved to new headquarters at Suite 809, Building A, 270 Park Ave., New York 17.

Oxford Paper Co., New York, has transferred **Matthew B. Mowat**, assistant order department supervisor, to the sales service department under **Chester N. Stupp**. Mr. Mowat's position will be taken by **George L. Keckler**.

Owens-Illinois Glass Co., Toledo, has started construction on a new sand plant

at Ione, Calif. The plant, scheduled for completion the latter part of this year, will produce silica sand, a basic raw material used in the manufacture of glass.

Oneida Paper Products, Inc., Clifton, N. J., has opened a new plant at Centrilia, Ill. The new plant will manufacture a complete line of flexible packaging materials, including multi-printed sheets and rolls, cellophane, polyethylene, glassine and other grades of transparent and semi-transparent bags.

I. L. Holtz has been made general sales manager of the Eastern Div. of **National Can Corp.**, Chicago. Mr. Holtz will be responsible for all general line as well as picker can sales in the entire Eastern Div. **S. V. O'Donnell** has been appointed sales manager of the western district.

The purchase of the entire assets of the **N.B.C. Sales Co., Inc.**, Utica, N. Y., has been announced by **Greenwood Packaging Supply Co.** and **Jet-Pak, Inc.**, Newark, N. J. N.B.C. will be known as **Greenwood Packaging Supply Co. of Utica**, N. Y. The new company will carry all of Greenwood's packaging products and service all of Greenwood's upstate New York accounts. Present personnel will be retained and the division will be headed by **Joseph D'Agostino**.

Bemis Bro. Bag Co., St. Louis, Mo., has started operations at its new multiwall paper shipping sack manufacturing plant



at Wilmington, Calif. The new plant provides increased multiwall bag manufacturing capacity and space for future expansion.

Harold Crafton has been appointed to the sales staff of **Milprint, Inc.**, Milwaukee, Wis. Mr. Crafton will be located in an Oklahoma territory.

Raymond Bag Co., Middletown, Ohio, has appointed **James M. Green** and **A. P. Wolff** to the company's sales staff. Mr. Green, with headquarters in Louisville, will be responsible for sales in Southern Indiana and Kentucky. Mr. Wolff will serve in Northern Indiana and Michigan from headquarters in Detroit.

William H. Swan has been promoted to industrial trades tape sales manager in the Buffalo, N. Y., Div. of **Minnesota Mining & Mfg. Co.**, St. Paul, Minn. Ap-

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Do it right: Use Kodapak Sheet

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Does this "match box" give you ideas? Ways you can use it? Other ways you can use Kodapak Sheet? If so... Good! Consult our nearest representative or write for names of firms handling Kodapak Sheet or specializing in its use.

NEW... ALL NEW! Write for new edition of "Properties of Kodapak Sheet" just printed. Four pages of data about Kodak cellulosics.



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Cellulose Products Division
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Sales offices: New York, Chicago, Dallas. Sales representatives: Cleveland, Philadelphia, Providence. Distributors: San Francisco, Los Angeles, Portland, Seattle (Wilson & Geo. Meyer & Co.); Toronto, Montreal (Paper Sales, Ltd.).

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*Plants
and people*

pointment of Mr. Swan will permit William F. Evans to devote his entire time to wholesale-retail sales in the Buffalo Div.

Albert Guthrie has been elected vice president and resident manager of Harris-Seybold (Canada) Ltd., Toronto, subsidiary of Harris-Seybold Co., Cleveland, Ohio. Mr. Guthrie succeeds Hedley Prout, who has retired after 42 years of service. Other newly elected officers of the Canadian firm include: Marguerite McAvoy, assistant secretary-treasurer; George S. Dively, board chairman; Ren R. Perry, president; and Joseph W. Powell, Jr., director.



A. Guthrie

Frank D. Corwin has been appointed Northwest sales manager for the Miller Label Co., Tacoma, Wash. The Pacific Waxed Paper Co. will no longer represent Miller Label Co. in the supermarket label field, as all label requirements will be handled by Mr. Corwin or by direct mail.

Edward H. Niederauer has been appointed division manager of the Kingsport Div. of the Mead Corp., Dayton, Ohio. George H. Sheets will be assistant division manager. John R. Taggart has been promoted to general paper mill superintendent at the Kingsport Div.



K. F.
Froelich
has been appointed
secretary and treasurer
of the company.

John C. Tiddy has been appointed sales representative in North and South Carolina for Lassiter Corp., Charlotte, N. C., packaging designers and printers. Mr. Tiddy will specialize in textile packaging.

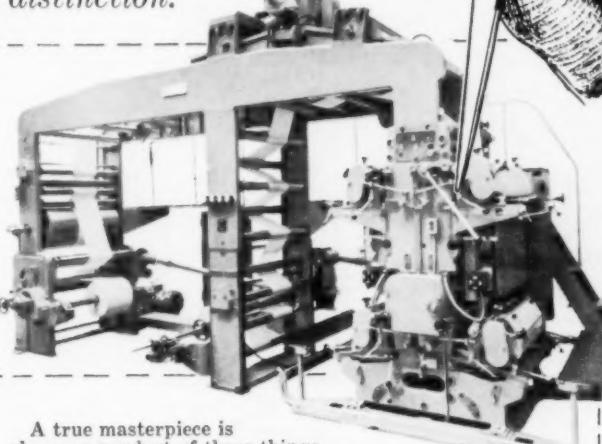
International Paper Co., New York, has opened a new branch sales office in the Dixie Terminal Bldg., 49 E. Fourth St., Cincinnati. Located at the office will be F. M. Surgiune, who will represent the Southern Kraft Paper & Bag Div.; James

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by **Holweg**
SINCE 1889

POLYETHYLENE PRINTER

NEW in concept,
crafted with old world
distinction.



A true masterpiece is always a product of three things—an original creative conception, the finest of materials, and inspired craftsmanship. So it is with the newly developed Polyethylene Printer... drawing upon almost seventy years of Holweg research and development this machine was planned from the ground up as a poly printer. Constructed with traditional care to meet the most rigid precision printing standards with the heavy-duty frame necessary to maintain high speed performance throughout sustained production schedules.

The Poly Printer also contains many built-in "firsts" guaranteeing better, more perfect polyethylene usability for all converting operations.

- Point-to-point variable speed tensioning devices transport the web without distortion.
- Surface and reverse printing in a single pass.
- Massive air movement with controlled heat insures dimensional stability.
- Selective rewind density independent of web tension.
- Many built-in features and optional attachments for paper, cellophane and foil such as slitter, perforator, splicer, sheeter.

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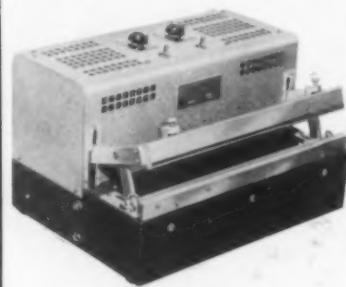
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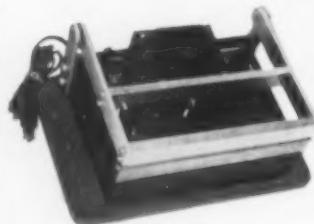
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- Seals all thermoplastics thru:
Wrinkles - Gussets
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- Foot pedal models up to 42"
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- Complete operator safety without guards
... Why?
- Because—we use COLD heater bars—
sealing pressure begins AFTER the
jaws close.



MODEL 15B

ELECTRO-MAGNETIC POWERED MODEL

Bench Model—Chassis 17" wide
Produces seals up to 15"
Operates from 115 volt AC line—1500 watts
Shipping Weight: 50 lbs.



MODEL 9A

FOOT PEDAL OPERATED MODEL

Bench Model—Chassis 9" wide
Produces seals up to 8"
Operates from 115 volt AC line—350 watts
Foot pedal not shown
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HERMAN & LEAL
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Quebec, Canada

Plants and people

Woodrow, who will represent the Bagpak Div.; and J. H. Aydlett, who will represent the Single Service Div.

The Bagpak Div. of International Paper will open a new sales office in Des Moines, Iowa, headed by Dale Rowe. The new office will be responsible for the sale of the company's multiwall paper bags throughout parts of Iowa, South Dakota and Missouri.

Dixie of California, subsidiary of Dixie Wax Paper Co., Dallas, Tex., has appointed Roy E. Hanson special sales representative for the Pacific Northwest. Mr. Hanson, who has worked with many food manufacturers, will work out of Dixie of California's plant in Burlingame, Calif.



R. E.
Hanson

Formation of the Boone Box Co., Inc., 1700 Seventh St., S., Louisville, Ky., has been announced. The company has reached a long-term working agreement with Highland Container Co., Jamestown, N. C., under which Highland will be the sole supplier of corrugated paperboard with which Boone Box will begin the manufacture of a complete range of boxes and shipping cartons. Officers of Boone Box are W. C. Miller, president and treasurer, and William Connor, vice president and secretary. The board of directors consists of the officers plus Earl N. Phillips, Seaborn Perry, John I. Pritchett and Ralph Bell.

The Multiwall Bag Sales Div., Union Bag & Paper Corp., New York, has appointed J. J. Patterson, Jr., to the newly created position of field sales manager. Mr. Patterson will advise and aid district managers and field sales representatives on a national basis. Under a new company set-up, Mr. Patterson's old sales district has been split into the northeast and southeast

districts. William W. Dipman has been named northeastern district sales manager and William T. Bess, Jr., has been named southeastern district sales manager.

General Box Co., Des Plaines, Ill., is nearing completion of a new corrugated box factory at Louisville, Ky., first step in a company program for expanding operations in the corrugated box field. The factory will be capable of supplying 30,000,000 sq. ft. of corrugated board per

month. The new plant will replace General Box Co.'s Louisville facilities which were destroyed by fire last October.

Sumner H. Williams has been elected vice president and general sales manager of the Dyestuff and Chemical Div. of General Aniline & Film Corp., New York. Mr. Williams served in a similar capacity with General Dyestuff Corp. and his election as an official of General Aniline is coincident with the recent merger of the two companies.

Graphic Art Displays, Chicago, producer of silk-screen cardboard and lithographed displays, has appointed Trevor Wyatt Moore, sculptor, as president of its newly formed Plastics Div. Mr. Moore will be in charge of design and production of vacuum-formed plastic displays and packaging.

Frederick J. Pool has been appointed sales manager for the Union Plastic Films Div., Transparent Package Co., Chicago. Mr. Pool replaces Gordon Cummins, who has been assigned to a special sales project for the company.

The U. S. Patent Office has issued patents covering the Unilox printing method and various multiple-ply plastic film products devised from it to Transparent Package Co. The Unilox printing process consists of laying ink between two plies of transparent film.



F. J.
Pool

Union Plastic Films Co., a division of Transparent Package Co., is now producing Unilox packages. Unilox packages of saran film are used to package liver sausage, meat spreads, chili, cheese and various other products. Unilox packages of Pliofilm are used to package meat loaves of all kinds. Further adaptations for various other food products are expected.

The Gardner Board & Carton Co., Middletown and Lockland, Ohio, has appointed William J. Duggan as salesman. T. E. Faulkner has been made a project engineer for the company.

Gaylord Container Corp., St. Louis, Mo., has announced that its subsidiaries, The Fairfield Paper & Container Co., Baltimore, Ohio, and The Dresden Paper Mills Co., Dresden, Ohio, have been merged with the parent company. They will be known as the Fairfield and Dresden Divisions of Gaylord Container.

Gaylord has established two new sales divisions—the East-Central Div. with headquarters in Columbus, Ohio, and the



**OF ALL THE WAYS TO COVER BREAD...
THESE WRAPPERS DO MOST FOR SALES APPEAL**

Their waxes are fortified with BAKELITE Polyethylene

Glossier surfaces, reduced rub-off, brilliant printing. Waxes fortified with BAKELITE Polyethylene offer all these *plus* advantages for your wrapper coatings. And the wrapping papers themselves benefit from greater strength, higher blocking temperatures and better heat seals.

Best of all, these improved coatings are low in cost. Your paper converter can apply them easily with his conventional methods and machines.

Once on the shelf, your packages coated with these toughened waxes stay bright and new looking. Since BAKELITE Polyethylene is colorless, its use as a wax modifier results in clear printing and colors that never look blurred. It's inert, odorless, and tasteless too . . . ideal for modifying frozen

food wrappers too. And freezer temperatures won't make it crack or peel.

Waxes blended with BAKELITE Polyethylene can give you more efficient, attractive packaging at no extra cost. Ask your paper converter about them. Or write for the booklet prepared by Bakelite Company which describes these and other applications of BAKELITE Polyethylene. For your free copy, write to: Dept. XS-55.



Wrappers courtesy of
Pollock Paper Corp., Dallas 22, Texas

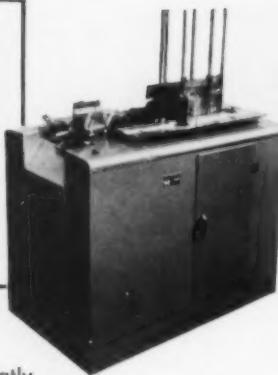
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REDUCE LABOR COSTS
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TUCK-O-MAT

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The Model 50 TUCK-O-MAT needs the part-time of only one attendant and greatly reduces your cartoning labor costs. The TUCK-O-MAT is versatile and offers complete cartoning flexibility. Write for folder BI-2.

CHECK THESE ADVANTAGES!

- Handles wide range of carton sizes
- Output of 4,000 cartons per hour
- Quick changeover
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- **CONVEY-O-MAT**
- The Model 54 CONVEY-O-MAT adds conveyor loading to the advantages of the TUCK-O-MAT. Delivers the set-up carton in upright position on the conveyor ready to receive your product.
- **MODEL 518 CARTON CLOSER**
- Used with the CONVEY-O-MAT the Model 518 provides a complete cartoning system.

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DIST. BY NEW JERSEY MACHINE CORP., HOBOKEN, CINCINNATI, CHICAGO, LOS ANGELES

Carefully Controlled **CONTRACT PACKAGING**

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strip packages
catch covers
flexible packages
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Manufacturers who use Fischer-Wehmann's service free themselves, once and for all, from problems connected with packaging their products. Fischer-Wehmann packages, inspects, cartons, ships. Every phase of our operation is supervised and controlled to maintain highest standards of quality and service. Our efficient, automatic equipment keeps costs at rock-bottom.

◀Totally enclosed, humidity and temperature controlled rooms in Fischer-Wehmann's plant for strip and unit packaging of sensitive pharmaceuticals.

Let us know your packaging requirements and we will promptly submit an estimate.



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Plants and people

Allegheny Div. with headquarters in Pittsburgh, Pa. Henry L. Custer has been named divisional vice president in charge of the new East-Central Div. and Smith A. Blackman is divisional vice president in charge of the new Allegheny Div. Joseph F. Roman will be general sales manager for the East-Central Div.

Elmer W. Lonsdale has been elected a vice president of Stranahan Foil Co., Inc., South Hackensack, N. J. Mr. Lonsdale, a member of the aluminum foil industry since 1925, was formerly associated with the Aluminum Co. of America, H. D. Catty Corp. and Aluminum Foils, Inc.



**E. W.
Lonsdale**

The Canning Machinery Div., Food Machinery & Chemical Corp., San Jose, Calif., has appointed J. E. Standiford and Michael W. Ward as representatives on the division's Eastern sales staff. Mr. Standiford has taken charge of the Indiana-Ohio-Kentucky territory, with headquarters at Lafayette, Ind. Mr. Ward has been assigned to the Illinois-Michigan territory with headquarters at Hoopston, Ill.

The Fitchburg Paper Co., Fitchburg, Mass., has appointed Usko Kontio as works manager of the company's Decotone Products Div. Allan Barr has been added to the sales staff of the division and will handle sales of industrial converting papers. John Pollock will continue as manager of sales of decorative laminating, and David Richards and Alfred Membrino will continue to handle sales of industrial converting papers.

John Baker has been appointed advertising manager and art director of Stone Container Corp., Chicago. Mr. Baker will be responsible for the firm's own advertising and for development of new advertising designs for customers' shipping containers. He succeeds the late Leonard Robert Light.



J. Baker

A. R. Weller has been promoted to comptroller of Stone Container Corp. Mr. Weller will serve also as special assistant to the vice president for finance.

Eclipse Plastic Industries, Inc., Sarasota, Fla., has opened a new plant located just outside Sarasota. The plant will ex-

FIRST IN Heat-resistant inks

FOR CELLOPHANE AND OTHER HEAT-SEALABLE STOCKS



NEW IPI FLEXOGRAPHIC INKS FOR CELLOPHANE
PRINTING RESIST SMEARING AND RETAIN
BRILLIANCE UNDER SEALING HEAT

At last . . . here's the ink that cellophane bag printers have long awaited. This new line of heat-resistant inks—now part of our famous high-gloss Gemglo series—really *resists* the heat generated on wrapping and bag machines.

These inks resist smearing, offsetting and blocking at the point of contact where the heat seal jaws clamp down on the thermoplastic-coated cellophane.

Even a solid area of ink withstands the heat from the sealing jaws. It stays more scratch-resistant . . . more light-fast . . . more scuff-proof. It retains its

brilliance longer . . . and performs better on the press. The heat merely releases the solvent and makes the ink adhere without damaging the ink film.

If you are plagued by customers' complaints over the quality of printing on cellophane or any heat-sealable stock due to ink troubles, talk to your IPI salesman. He has the answer for ink smear caused by heat-sealing machines—it's new IPI heat-resistant inks. They pay off in better running qualities—on the press and on the packaging machine with a better appearance all along the line!

IPI, IC and Gemglo are trademarks of Interchemical Corporation

Interchemical Corporation

PRINTING INK DIVISION • 67 W. 44th ST., NEW YORK 36, N. Y.



INTERCHEMICAL
PRINTING INKS



RELY ON IPI FOR LEADERSHIP IN INK RESEARCH

SEPTEMBER 1954

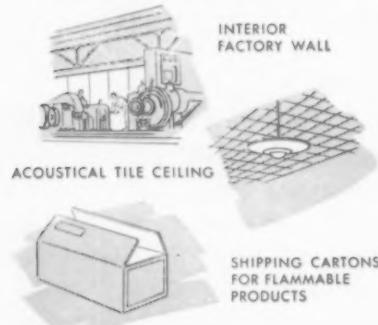
185

Borotherm*

NEW PRODUCT OF
TRONA RESEARCH

Makes Surface Coatings
FIRE RESISTANT!

This newest development of American Potash & Chemical Corporation, in conjunction with recognized paint authorities, gives exceptional fire resistant properties to water-base protective coatings. BOROTHERM, properly formulated, makes coatings which meet Department of Commerce Specification CS-42-49 (Class F) and Federal Specification SSA-118a for fire resistance. It is especially adaptable for use with coating grade polyvinyl acetate to develop inexpensive washable fire-resistant qualities in insulating and wallboard coatings for industrial and non-industrial uses.



For further details on BOROTHERM, or for special technical service to assist you in the formulation of coatings, write —



SALES DEVELOPMENT DEPT.
**American Potash
& Chemical Corporation**

3030 West Sixth Street, Los Angeles 54, California

* Trade Mark AP&CC

Plants and people

trude a complete line of plastic pipes, tubes and rods and packaging films and sheets. It will also vacuum form sheets for the display and advertising industry. Officers of the company who were recently elected are: E. G. Engman, president and general manager; Gene L. Green, secretary and vice president; and Ralph Engman, treasurer and vice president. Directors of the company include: Gilbert F. Fitzgerald, George Castner, Anthony V. Weasler, Florence Engman.



Lt. Gen Albert C. Wedemeyer has been elected a vice president and director of **Rheem Mfg. Co.**, New York. Gen. Wedemeyer resigned a similar post with **Avco Mfg. Corp.** to accept the new position. He joined Avco shortly after completing 32 years of military service in which time he won recognition as an outstanding military strategist.

Ralph R. Hull has been appointed general supervisor of sales for **Facile Corp.**, Paterson, N. J., manufacturer of reinforced laminated materials for the decorative and industrial trades.

Formation of the **DJD Sales Corp.**, 31 W. Union St., Pasadena 1, Calif., an independent distributor of packaging industry materials and supplies, has been announced. Officers of the new firm include: **W. D. Long**, president; **Z. V. Shaw**, vice president; and **Harvey E. Herr**, secretary-treasurer. The new firm has been appointed distributor in greater Los Angeles and the Southeast for **Nox-Rust Chemical Corp.** of Chicago.

C. J. Lafferty, Jr., has been appointed sales promotion manager of the Cryovac Div., **Dewey & Almy Chemical Co.**, Cambridge, Mass.

John Klaudiny has been made art director of the label design section in the Cryovac Div. Mr. Klaudiny will work with **James E. Lee** on color imprinting of Cryovac plastic bags.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., has appointed **A. F. Wendler** as special assistant to the director of sales of the company's film department. **Robert C. Myers** has been named to succeed him as manager of industrial sales.

Du Pont has acquired options on land in California for the construction of a plant for the manufacture of tetraethyl lead and Freon refrigerants. Freon, the gas which is the propellant for aerosol

sprays, is needed to serve the aerosol industries operating on the West Coast.

W. A. Wylde has been named executive vice president and a director of **Deerfield Glassine Co., Inc.**, Monroe Bridge, Mass. **William K. Prutzman** has been made treasurer of the company and **Charles W. Cassell** has joined Deerfield as assistant to **Paul E. Hodgdon**, president. **R. L. Cain** has been made a salesman on special assignments and **Harold L. Field** has joined the company as chief chemist.

Champion Paper & Fibre Co., Hamilton Ohio, has elected **Harold H. Helm** and **Sidney J. Weinberg** as directors. The new board members assume the posts of **Harry G. Poundsford** and **Henry S. Bowers**, elected directors emeritus.

Central States Paper & Bag Co., St. Louis, Mo., has appointed **Jack Schweitzer** and **Maurice Harris** as sales representatives. Mr. Schweitzer will locate in Kansas City, Mo., and Mr. Harris will cover western Pennsylvania, with headquarters in Pittsburgh.

Cellulose Products Co., High Point, N. C., manufacturer and distributor of furniture packaging, pads and blankets, will open a plant in Lenoir, N. C., with **Phillip G. Griffin** as manager.



Lynch Corp., Toledo, Ohio, has promoted **A. V. Petersen** to sales manager of packaging machine sales. He succeeds **M. V. Girkins**, who has retired after 18 years with the firm. **Merle F. Stutzman** has been appointed sales manager of compressor sales and **R. N. Craven** has been made manager of the Chicago midwestern district offices.

American Can Co., New York, has announced an expansion program that will double the capacity of the company's St. Paul, Minn., plant. The expansion will include installation of facilities for the manufacture of beer cans and will increase the plant's output of fruit and vegetable containers.

American Can has started construction on a new lithographing and warehousing building adjacent to its Pacific factory in San Francisco. First and second floors of the new building will be used for storing tinplate and finished containers. The third floor will be devoted to metal lithography.

Visking Corp., Chicago, has purchased the real estate and buildings of the **Allen B. Wrisley Co.** at 6801 W. 65 St., Chi-

unequalled uniformity
a big plus when you use

VISQUEEN[®]



Constance Bannister Photo

First polyethylene film produced in the United States was VISQUEEN film. Years of production experience have built up a backlog of technical know-how unmatched in the industry. This results in a film of unvarying characteristics—strength, elasticity, gauge and width—roll after roll after roll. Another reason why VISQUEEN outsells all other brands of polyethylene.

Converters of VISQUEEN film are leaders in the design and manufacture of flexible packages. They can help you with all your packaging problems. The coupon will bring their assistance.

VisQueen®

film... a product of **THE VISKING CORPORATION**

Plastics Division, Terre Haute Indiana • World's largest producers of polyethylene sheeting and tubing
In Canada: VISKING Limited, Lindsay, Ontario • In England: British VISQUEEN Limited, London

This advertisement is one of a series telling facts about VISQUEEN film.

SEPTEMBER 1954

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IMPORTANT: VISEQUEEN film is all polyethylene but not all polyethylene is VISEQUEEN. Only VISEQUEEN, produced by process of U. S. Patents No. 2461975 and 2632206, has the benefit of research and resources of THE VISKING Corporation.

Send me names of converters of VISQUEEN film serving my area.
____ Company _____ City _____ Zone _____ State _____



all I want's
the facts

NEW flexographic LEMBO

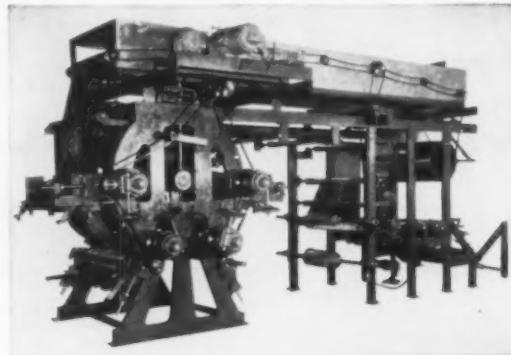
4 color supported-web press

Supported-web construction permits *in-register* printing at *high speeds*, even with polyethylene and other extensible plastic films. All the strain of going through the rollers is taken up by the continuous blanket. The web is *carried*—not pulled—from impression cylinder to impression cylinder, assuring perfect printing at speeds from 0 to 500 feet per minute. Widths from 24" to 60".

- Choice of 360° planetary gear register control or electronic register control
- Impression cylinders taken out of contact with printing rollers by electric motors
- Optional unit dries ink between impressions for outstanding speed
- Can be equipped for gravure printing, and with rewinds for cellophane or paper

Full details and quotations on request

Ask about Lembo surface printing machines up to twelve colors.



LEMBO machine works, inc.
248 East 17th St., Paterson 4, N. J.
Manufacturers of Printing Presses and Cylinders

RARITAN for ROLLERS

A Complete Service

When you bring your engraved metal roller requirements to Raritan, you are placing your work in expert hands. Not only does Raritan do top-flight engraving, but we also know the characteristics of the equipment on which the rollers will be used. This serves as *double-insurance* of highest quality.

- Raritan Kwikool Embossing Rollers for embossing paper and vinyl film and sheeting
- Raritan Engraved Applicator Rollers for flexographic printers
- Raritan Coating Rollers for paper, film and foil
- Raritan Mill and Die Engravings on all metals, including steel, aluminum and copper

Raritan engraves rollers from laboratory size up to 32" diameter x 12' face. Prompt deliveries. Accurate workmanship.



Send inquiries to

Raritan engraving company
107-109 East 17th St., Paterson 4, N. J.
Division of Lembo Machine Works, Inc., Paterson, N. J.

Plants and people

cago. The property will give Visking additional room for its Clearing Div. and home office.



C. A. Claus

Carl A. Claus has been appointed manager of eastern sales for R. A. Jones & Co., Inc., Cincinnati, Ohio, manufacturer of cartoning machines. Offices have been established at 382 Springfield Ave., Summit, N. J. Mr. Claus will be aided by Allen Suydam and George Hussey.

W. D. Morrison has been named assistant to the director of the development department of Celanese Corp. of America, New York.

Bradley Container Corp., Maynard, Mass., manufacturer of Bracon polyethylene collapsible tubes and squeeze bottles, has appointed Dick Muller as Midwest sales manager.

Louis A. Croplis has been appointed New York regional manager for American Type Founders, Elizabeth, N. J. Mr. Croplis succeeds Frank Shober, who has retired. Edwin B. Hundley, former regional manager in Atlanta, is being transferred to American Type's Cincinnati branch. The Atlanta office will be managed by Arthur R. Bink.

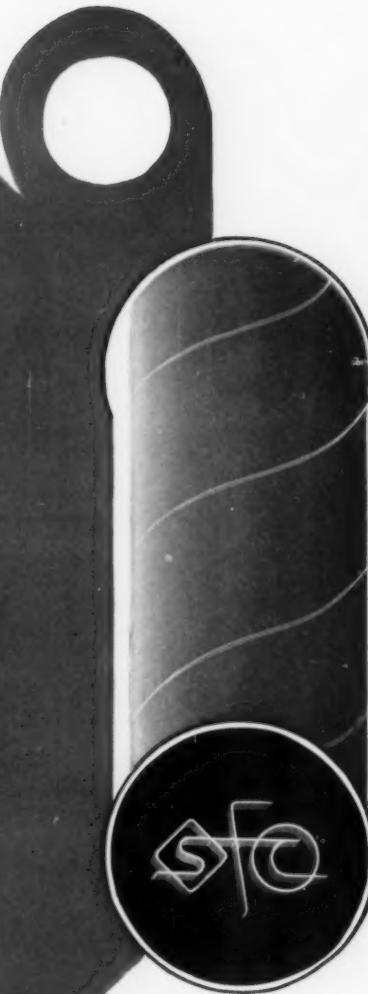
Ames Bag Co., Selma, Ala., has established a packaging division under the direction of A. S. Houston. The new division produces plain and printed polyethylene, cellophane, Pliofilm, glassine and other films in bags, sheets and rolls. It is equipped with modern four-color flexographic printing machinery and high-speed bag-making machinery.

Henry C. Tiews has been promoted to production manager for the Bound Brook, N.J., plant of the American Partition Co., Div. of Clinton Foods, Milwaukee, Wis., producer of packing partitions.

C. F. Elmore, former sales manager of the Beverage Div. of the Brockway Glass Co., Brockway, Pa., died at his home on July 17. He had been in ill health for several years.

Thomas Canavan, sales representative for Western Waxed Paper Div., Crown Zellerbach Corp., San Leandro, Calif., died recently at his home in Portland, Ore., at the age of 67.

UTILITY and STYLE



Specialization and experience combine the advantages of metal ends, the economy of paperboard and label in a single package—rugged and versatile in use, handsome to look at.



SEFTON FIBRE CAN CO.

St. Louis; New Orleans; Portland, Ore.; Piqua, Ohio

For your information

The Glass Container Mfrs. Institute, Inc., has established a new labor relations division under the direction of **Ralph A. Lind**.



R. A. Lind

The new division will handle, among other things, joint collective bargaining for the manufacturers of glass containers as well as for other segments of the glass industry. The National Assn. of Mfrs. of Pressed & Blown Glassware has also established

a similar labor relations division and the two units will be headquartered at GCMII offices under Mr. Lind's direction. **John H. Morris**, who has been associated with the pressed and blown glassware group for several years, has been named assistant to Mr. Lind.

Continental Can Co.'s Chicago Research Division has announced the development of a simple bacteriological medium found useful for the growth and isolation of spoilage organisms from canned foods. The new medium, developed by **Dr. Clarence F. Schmidt** in 1950, is designated as PE-2. Data obtained from experiments to evaluate these media were published by **J. F. Folinazzo**, research chemist, and **V. S. Troy**, section chief. Reprints of the published report are available on request to Continental's Research Division Library, Chicago.

Columbia University's School of Engineering is offering again this year an evening graduate course in **Package Engineering**. The course (G.S. Industrial Engineering 247) consists of 15 Wednesday evening lectures from 7:10 to 9 p.m., beginning Sept. 29 and ending Jan. 19, and affords an opportunity to earn two points toward a degree. Registration (fee: \$50) should be made between Sept. 17 and 22. The course is under the direction of **Prof. Frederick C. Winter**, who will be assisted by 18 outstanding lecturers from the packaging industry. For course outlines, list of lecturers, etc., write to Prof. Winter at Columbia University, 116 St. & Broadway, New York 27.

More than 100 ways in which pressure-sensitive tapes serve the nation's food industry are described in a new 24-page manual available on request from the **Minnesota Mining & Mfg. Co.**, 900 Fauquier St., St. Paul 6, Minn. It contains 142 illustrations showing how 18 various "Scotch" brand pressure-sensitive tapes can be used.

Through special arrangements with the **Printing Packaging & Allied Trades Re-**

search Assn.

"Packaging Abstracts," distributed in the United States by the **Packaging Institute** and formerly available only to the Institute's members, is now available to firms, libraries and persons other than members. PATRA does the actual abstracting and publishes the journal in England. The journal, which covers all the world literature on packaging, is priced at \$35 a year to non-members of the Institute. Orders are being accepted by the **Packaging Institute**, 342 Madison Ave., New York 17.

Container Laboratories, Inc., has announced the availability of its "Cushioning Nomogram," a single alignment chart developed for simplified calculation of package cushioning requirements (see "A Package Cushioning Nomogram," **MODERN PACKAGING**, Aug., 1954, p. 124). Copies of the chart, priced at \$1 each, may be obtained by writing to **Container Laboratories, Inc.**, 1519 Connecticut Ave., N.W., Washington 6, D.C.

The Point-of-Purchase Advertising Institute has moved to new and larger quarters at 1624-29 Salmon Tower Bldg., 11 W. 42 St., New York 18. New telephone number is Lackawanna 4-1162.

A new Technical bulletin issued by **DuPont** and titled "90% Technical Methoxychlor Oil Concentrate Fly Sprays and Aerosols" contains latest information on the use of methoxychlor in aerosol insecticide sprays and oil-based sprays. Technical data on solubility, types of solvents and emulsifiers, and a bibliography of manufacturers' bulletins are included. Copies of the publication and additional information are available on request to the Public Relations Dept., E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del.

The International Staple & Machine Co. has announced an 11-minute sound movie, "Package for Profit," which shows stapling machines operating in actual installations and explains their operation. Prints of the movie are available for loan on a non-charge basis from International Staple & Machine Co., 801 E. Herrin St., Herrin, Ill.

"Futurama—See the Tomorrow of Canning Today" is the theme of the 48th annual exhibit of the **Canning Machinery & Supplies Assn.**, to be held in connection with the **National Canners Assn. Convention**, Feb. 19-23, Conrad Hilton Hotel, Chicago. Of special interest will be the technical conference, designed for the research, engineering and production personnel of the canning companies.

Newly elected 1954-55 officers of the **Chicago Section of TAPPI** are **J. D. Johnson** of Container Corp. of America, chairman; **A. C. Dreshfield** of Chicago Testing Laboratory, vice chairman; **J. R. Lyons** of Atlas Boxmakers, Inc., secretary; **R. D. Carter** of Keyes Fibre Co., treasurer.

A new six-page brochure describing and illustrating the features and specifications of AMF equipment for production and packaging of rolls—brown 'n serve, hamburger and many other roll varieties—has been issued by the **American Machine & Foundry Co.'s AMF Bakery Division**. Requests for copies of the booklet, titled "Roll Equipment for Streamlined Variety Roll Production," should be addressed to AMF Bakery Div., American Machine & Foundry Co., 261 Madison Ave., New York 16.

A new catalog published by **Popper & Sons, Inc.**, illustrates and describes the company's line of Rejafix marking machines, including the hand-operated, semi-automatic motorized and fully automatic models. Titled "The Most Versatile Printing Equipment," the catalog may be

What's doing

Sept. 9-11—**National Paper Trade Assn.**, Fall Meeting, Conrad Hilton Hotel, Chicago.

Sept. 11-14—**Packaging Machinery Mfrs. Institute**, 22nd Annual Meeting, Grove Park Inn, Asheville, N. C.

Sept. 12-15—**Confectionery Caravan Show**, Palmer House, Chicago.

Sept. 23-24—**National Flexible Packaging Assn.**, Fall Meeting, Moraine-on-the-Lake, Highland Park, Ill.

Sept. 26-30—**Master Brewers Assn. of America**, Waldorf Astoria, New York.

Sept. 28-30—**Ninth Annual Industrial Packaging & Materials Handling Exposition, Competition & Short Course**, Coliseum, Chicago.

Oct. 3-5—**Produce Packaging Assn.**, Fourth Annual Conference & Exposition, Shoreham Hotel, Washington, D. C.

Oct. 10-13—**National Assn. of Food Chains**, 21st Annual Meeting, Waldorf-Astoria, New York.

Oct. 11-15—**National Hardware Show**, Navy Pier, Chicago.

THE *Aerosol Valve* FOR YOUR PRODUCT *by Precision*

• So widespread has been the public acceptance and demand for self-dispensing packages equipped with colorful Precision valves, that new type products and additional brands are added daily to the long list enjoying the plus values offered by Precision. To keep pace with this tremendous growth, Precision's production and research are continually expanding both here and abroad so that your package may have the merchandising and technical advantages of a Precision valve regardless of the product, container or filling method involved.

Why is Precision the Leader?

DESIGN . . . The wide range of Precision valves featuring positive, fingertip operation assures a successful solution to your specific spray characteristic requirements.

CONTAINER . . . Precision has a valve engineered for the aerosol container of your choice plus the widest selection of plastic colors to enhance the beauty of your package.

PRODUCTS . . . Plastic construction eliminates corrosion enabling Precision



valves to perform efficiently for all products whether foam, residual or true aerosol.

FILLING METHOD . . . All types of aerosol products with Precision valves, are being filled successfully by pressure as well as refrigeration at the lowest cost.

QUALITY . . . Precision's basic research, production skill, development techniques and 100% inspection of over 100,000,000 time-tested valves is your assurance of high quality.

ECONOMY . . . The highest plant production efficiency, as well as the lowest rejection rates for filled containers, assures maximum economy with Precision valves.

AVAILABILITY . . . The world's largest aerosol valve manufacturing facilities, are combined with the latest production methods and techniques, to give production schedules that assure prompt deliveries.

* We invite your inquiry to enable our staff of aerosol valve technicians to work cooperatively in satisfying your valve requirements.



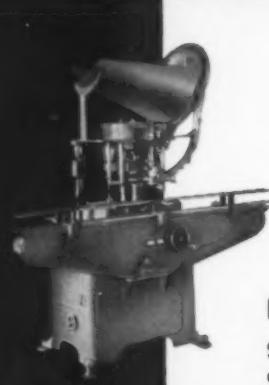
Precision Valve Corporation
700 NEPPERHAN AVENUE • YONKERS 3, NEW YORK

RESINA CAPPERS

A MODEL FOR EVERY PURPOSE . . .

A SPEED FOR EVERY NEED!

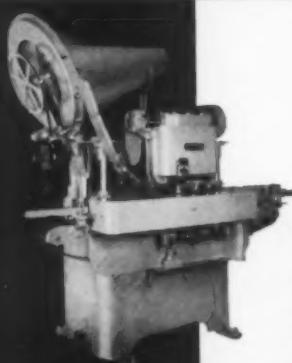
Capacity up
to 60 per
minute.



RESINA

Standard, single head,
automatic screw capper.

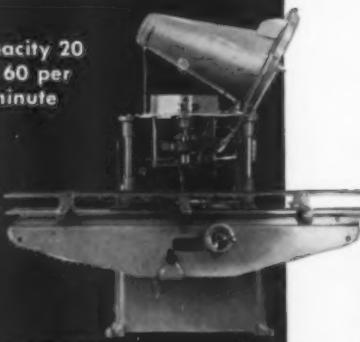
Flexible
Fast
Fully
Automatic



RESINA

High speed, straight line
screw capper. Rated for
speeds up to 300 per
minute depending on
size of container.

Capacity 20
to 60 per
minute



RESINA

Automatic innerseal ma-
chine for selecting and
applying standard inner-
seals to various types
and sizes of tin cans as
commonly used in the oil
industry.

Agents in principal cities through-
out the United States and Canada

Other models available.
Write for descriptive
literature.

RESINA AUTOMATIC MACHINERY CO., INC.
BROOKLYN 31, N.Y.

For your
information

obtained by writing to Popper & Sons, Inc., 300 Fourth Ave., New York 10.

Date for the 1954 annual meeting of the Parenteral Drug Assn. has been changed to Oct. 20-22, Barbizon Plaza, New York.

The publication of a new bulletin describing the applications, operation and features of the Turbo Machine Co.'s Dura-Mill filling machine for liquids and semi-viscous materials has been announced. Copies are available on request to the Turbo Machine Co., Lansdale, Pa.

The 15th revised edition of the Signode Steel Strapping Co.'s "Guide to Better Shipping Catalog" is now available. Latest information on pallets, bundles, crates, etc., is presented in the booklet, which also includes illustrations of a wide selection of strapping tools and equipment. Copies of the guide are available from Signode Steel Strapping Co., 2604 N. Western Ave., Chicago 47.

Monsanto Chemical Co. has issued a new illustrated booklet on fabricating and decorating of Vupak, transparent rigid cellulose acetate. Various fabricating techniques are described, including vacuum forming, cutting, folding, creasing, sealing, beading and drawing. The booklet, which also contains a list of equipment suppliers, is available from Department SV, Plastics Div., Monsanto Chemical Co., Springfield, Mass.

Printed copies of Simplified Practice Recommendation R70-54, Salt Packages, issued by the Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce, are now available. This latest revision provides a simplified schedule of standard package sizes for both Eastern and Pacific Coast practice. Requests for copies (10 cents each; 25% discount for 100 or more copies) should be addressed to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

The importance of selecting the proper adhesive for efficient laminating is discussed in a new full-color brochure recently published by the Rubber & Asbestos Corp. Titled "Bondmaster Adhesives for Film, Foil, Fabric and Other Web Laminations," the booklet may be obtained from Rubber & Asbestos Corp., 225 Belleville Ave., Bloomfield, N. J.

Next year's 10th International Printing Machinery & Allied Trades' Exhibition (IPEX), scheduled for July 5-16, 1955,

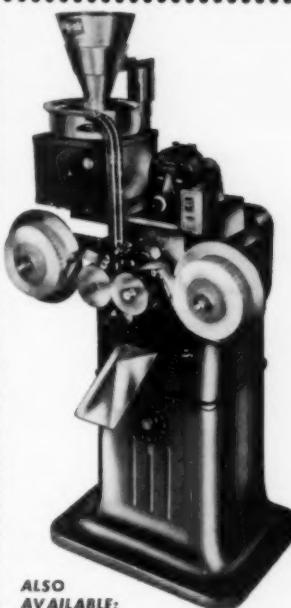
will be held at Olympia, London. It is reported that it will be the greatest exhibition of printing machinery and kindred products ever to be held in the British Commonwealth. IPEX is open to suppliers of machinery and accessories for the printing and allied trades, including such products as paper, board, plastics and converted paper products, process engraving equipment, cameras, inks and rollers, composing-room equipment and printers supplies. The third exhibition of British Instrument Industries will be held at Earls Court, London, at the same time as IPEX. This conjunction of events is expected to enable visitors to consider comprehensive plans for insuring that they get maximum value from the up-to-date printing equipment they purchase.

"Hidden Costs of Servicing Customers" by William G. Henry of the United Board & Carton Corp., the final talk in a series presented at the Folding Paper Box Assn.'s Sales Seminar held at the association's recent annual meeting, has been published and is available in limited quantities from the association's office, 337 W. Madison St., Chicago 6.

Britain's fourth International Packaging Exhibition, to be held at Olympia, London, Jan. 18-28, 1955, will be the largest and most comprehensive yet staged in England, according to Provincial Exhibitions, Ltd., and the Institute of Packaging, sponsors of the event. All exhibit space in both National and Empire Halls has already been allocated and a broad, comprehensive showing of the latest packaging developments is contemplated.

"Techniques of Plant Maintenance & Engineering—1954," the annual volume containing the proceedings of the Plant Maintenance & Engineering Conference, has been published by Clapp & Poliak, Inc. The book, the most extensive ever published in the series, contains texts of papers read by 24 authors and direct answers to more than 1,300 questions. A feature this year is the summary of 20 roundtable discussions. The 291-page book is sent without charge to those who attended the conference. Others may obtain it from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, for \$7.50.

Volume 3 of "Elements of Food Engineering" by Milton E. Parker, E. H. Harvey and E. S. Stateler (Reinhold Publishing Corp., 430 Park Ave., New York 22; \$6.75), last in this series dealing with the production, preparation, processing, handling and distribution of foods, is now off the press. More than 100 pages of the latest volume deal with the materials and methods of packaging. Subjects covered include the packaging of solid foods, packaging of liquid foods, packaging machinery, testing packages and materials, and quality control.



ALSO AVAILABLE:

Semi-Automatic Unit Packager with smaller capacity at lower cost.

WRAP-ADE AUTOMATIC UNIT PACKAGER

A VERSATILE, LOW COST MACHINE FOR
PACKAGING PRACTICALLY ANY SMALL ITEM!

The WRAP-ADE UNIT PACKAGER performs an entire cycle of packaging operations—including feeding, filling, forming and sealing practically every type of heat sealing material. It has been built on the simplest possible principles conducive to high speed packaging, versatility, and low upkeep costs.

CHECK THESE OUTSTANDING FEATURES:

- FEEDING MECHANISMS available for all types of products: conveyor, magazine, rotary table, volumetric filler, automatic hoppers.
- SIZES: Can be designed for any products up to 3" x 7".
- CAPACITY: Small items such as tablets—300-350 per minute, units the size of a bottle cap—125 per minute (single row*), powder packets—2" x 3"—70 per minute (single row*). *Duplex feed, where practical, will double speed.
- Quick adjustment for multiple cut-off, no gear change necessary.
- May be equipped to print markings in register.

Send us a sample of your product today for our prompt quotation.
You will be surprised to see how much you can save!

MACHINE CO., INC.

Manufacturers of Packaging Machinery for over 20 yrs.
83 VALLEY STREET, BELLEVILLE 9, NEW JERSEY
PHONE—PLYMOUTH 9-6150

IMPORTANT NOTICE TO FLEXOGRAPHIC PRINTERS

The Roto-Type Corporation has no association or connection with any individuals or corporations engaged in the converting, printing or allied fields.

The complete list of Roto-Type Stockholders are

Thomas A. White

Thomas A. Barbera

Herbert Kaufman

Any information to the contrary that is being circulated to our friends and customers is untrue and misleading and subject to legal action.

Signed

Thomas A. White

President

Thomas A. Barbera

Vice President

Complete Flexographic Service



COMPLETE SERVICE
RUBBER PRINTING PLATES
PHOTO ENGRAVING
ENGINEERED ART WORK

ROTO-TYPE CORP.

36-41 36th ST., LONG ISLAND CITY 6, N. Y.

TEL.: STILLWELL 4-2538 - 4-2508

U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey

Thread and Zipper Package. D. B. Chambers (to Coats & Clark, Inc., Wilmington, Del.). U.S. 2,681,731, June 22. A package for merchandise comprising a container and a cover therefor, both of which are of transparent material, said cover comprising a flat circular disk having a cylindrical hollow core attached endwise to one side of same with the opposite end of the core being open.

Packing Card Construction for Dispensing Adhesive-Tape Labels. F. W. Brady, Chippewa Falls, Wis. U.S. 2,681,732, June 22. In a dispensably mounted pressure-sensitive adhesive tape, the combination comprising a backing board composed of a thin layer of laminar concreted material having a limited susceptibility to splitting parallel to its faces, a pressure-sensitive adhesive-tape portion in adherent contact with one face of said board, said board being divided into a minor severable marginal starter strip portion and a main tape-mounting portion.

Article Positioning and Cushioning Device for Use in Shipping Containers. C. D. Welshenbach and T. H. Gagen (to The Hinde & Dauch Paper Co., Sandusky, Ohio). U.S. 2,681,733, June 22. An article positioning and cushioning member for use in shipping containers comprising an elongated sheet having at each end a transverse fold line spaced inwardly from end of sheet, longitudinal slot extending inwardly from end of sheet, longitudinal slot extending inwardly from said fold line and having tongues integral with sheet at opposite ends of each slot.

Container Cap Liner. L. C. Miller (to Formold Plastics, Inc., Chicago, Ill.). U.S. 2,681,742, June 22. A resilient plastic liner for bottle caps comprising a substantially circular, normally relatively flat, imperforate, resilient and deformable disk-like body portion, a resilient and deformable annular rib surrounding said body portion and extending upwardly out of the plane of said body portion, upper face of said rib having an annular groove.

Automatic Labeling Machine. S. R. Phin and D. A. Caulford (to Phin Sales Co., Toronto, Ont., Canada). U.S. 2,681,743, June 22. A machine comprising a main frame unit, a motor mounted on frame, a main drive shaft, an endless chain conveyor operating longitudinally of main frame, a label drum rotatably mounted on platform and having a label magazine mounted above said drum, being equipped with a sucker device associated with said label magazine and movable to withdraw a label therefrom.

Can-Closing Machine. B. Lipson (to Girard Paint & Varnish Mfg. Co., Philadelphia, Pa.). U.S. 2,681,758, June 22. In a machine for crimping lug-type lids to cans or the like, an elongated frame having a generally horizontal track for slidably supporting a plurality of cans thereon; a crimper mounted adjacent one end of frame above said track, said crimper having a downwardly directed head, a plurality of pivoted crimping fingers mounted on the periphery of said head and means including a cylinder and a double-acting compressed-air-operated piston operatively connected to the crimping fingers for actuating said crimping fingers so as to force them inward and upward against the lugs of a lid, a can and its lid having been positioned against the under side of the head, and thereby crimp the lugs into locking engagement.

Apparatus for and Method of Chaining Enwraps. C. W. Vogt, Norwalk, Conn. U.S. 2,682,206, June 29. Apparatus for assembling enwraps, comprising a feed mechanism for advancing a series of enwraps, a second feed mechanism to receive enwrap from first mechanism, each of said feed mechanisms having different enwrap-advancing characteristics.

Carton-Converting Machine. C. Z. Monroe and N. G. Raymond (to Ex-Cell-O Corp., Detroit, Mich.). U.S. 2,682,208, June 29. In a carton-converting machine adapted to receive a continuously moving web of paperboard and to produce therefrom a series of completely severed carton blanks having scored folding lines and printed indicia accurately located relative thereto, the combination of means for supplying a web under

tension to aid machine, a decurler roll for neutralizing residual curvature in web and means for printing identifying indicia at spaced intervals on web.

Box-Making Machine. E. L. Bivans (to E. L. Bivans, Inc., a corporation of California). U.S. 2,682,209, June 29. A box-making machine comprising a hinged bed for opening a collapsed box, an opposed butt plate and means for varying the separation of said butt plate from the hinge axis of said hinged bed to accommodate boxes of different widths.

Box-Making Machine. E. L. Bivans (to E. L. Bivans, Inc., a corporation of California). U.S. 2,682,210, June 29. A box-making machine comprising a bed, means for feeding to said bed a box having an end flap projecting therefrom, said end flap having an inner fold line where it joins box and an outer fold line adjacent the end of said flap.

Heat-Sealing Machine of the Thermal-Impulse Type and Sealing Bar Therefor. N. Langer, New York, N.Y. U.S. 2,682,294, June 29. A sealing bar for heat-sealing machines comprising, in combination a substantially rigid backing member, a layer of elastic insulating material thereon, an elongated directly heated flexible metal member mounted on said layer constituting a heater element adapted yieldingly to conform to the surface of the materials to be heat sealed.

Valved Dispensing Cap for Collapsible Tubes. C. Vitale, Newark, N.J. U.S. 2,682,358, June 29. A replacement dispensing cap for a collapsible tube having an externally screw-threaded discharge neck, said cap comprising a hollow cylindrical body closed by an outer end wall and open at its inner end, said open inner end being internally screw threaded for engagement with discharge neck of tube.

Pouring Spout for Friction-Plug Containers. G. W. Wigert (to American Can Co., New York, N.Y.). U.S. 2,682,359, June 29. A pouring spout for a container having a friction ring including a substantially vertical countersink wall united with body of container in a projecting end seam, front wall having a hook portion at upper end thereof and extending inwardly and downwardly over top of said seam and against upper end of countersink wall, an inward projection disposed at bottom of front wall and engaging beneath said end seam to cooperate with hook portion for gripping said seam and countersink wall, thereby securing spout on ring.

Friction-Plug Container and Pouring-Spout Assembly. G. W. Wigert (to American Can Co., New York, N.Y.). U.S. 2,682,360, June 29. A detachable pouring spout for a container having an end closure formed with a pouring opening therein, including a peripheral portion and a countersink wall secured to body of container in a radially outwardly projecting upstanding end seam, said spout comprising a pouring wall extending from opening and over said seam.

Tote Box. M. Larson, A. L. Stedman and T. Dannemiller (to Convoy, Inc., Canton, Ohio). U.S. 2,682,362, June 29. A stacking receptacle of the tote-box type comprising a bottom panel, side panels formed integrally with bottom panel, said side panels extending upward from bottom panel to form side walls of the receptacle; cuff-like reinforcing elements at the tops of side panels, reinforcing elements being located externally of side panels and having tabs at their ends projecting into and forming part of ends of receptacle.

Interfolded Paper Dispenser. A. S. Krueger and N. J. Sly (to Alwin Mfg. Co., Green Bay, Wis.). U.S. 2,682,441, June 29. In an interfolded paper dispenser, the combination with a case having a wall provided with a dispensing slot, of a follower plate provided with biasing means adapted to urge a pack of interfolded paper contained within the case toward said slot, an abutment against which a margin of the pack is pressed by said plate.

Valved Container. M. R. Metzger, Muscatine, Iowa. U.S. 2,682,902, July 6. A container adapted to be filled with fluid or granular material by way of a filling nozzle, comprising a hol-

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low body formed of flexible, fluid impervious, film-type material and closed throughout except for a small-sized mouth in one portion thereof, having a check-valve arrangement consisting of an open-ended main tube formed of flexible, fluid-impervious, heat-sealable "plastic" film disposed within body.

Closure for Containers, P. F. Gay (to Imperial Chemical Industries, Ltd., a corporation of Great Britain). U.S. 2,682,903, July 6. A closed container made of flexible waterproof film material and impervious to water under pressure for prolonged periods of time, comprising as a closure thereof a clumped open end portion of the container, a tube of elastomeric material fitted about clumped open end portion, the normal diameter and bore of tube of elastomeric material being such as to fit tightly about clumped open end portion.

Carton, E. B. Whitehead (to Atlantic Carton Corp., Norwich, Conn.). U.S. 2,682,949, July 6. A protective shipping and storage carton structure for receiving and engaging the sides and ends of an elongated fragile Thermos bottle which is provided with an upper reduced neck and a projection depending from the bottom thereof comprising, secured together opposite and adjacent vertically disposed longitudinal side walls of relatively greater length and transverse width than length and diameter of bottle to be received therebetween.

Plastic Tube for Pastes and Other Viscous Materials, H. A. Smith, New York, N.Y. U.S. 2,682,974, July 6. A collapsible tube having a body portion wholly formed of a plurality of laminations of flexible thermoplastic material, at least one of said laminations being relatively thick and formed of polyethylene and at least one of said laminations comprising a polymer of vinylidene chloride and being relatively thin in comparison with the polyethylene lamination.

Apparatus for Feeding Cylindrical Wrappers, D. G. Ashcroft (to Imperial Chemical Industries, Ltd., a corporation of Great Britain). U.S. 2,682,983, July 6. Apparatus for feeding parallel horizontal cylindrical objects in a pre-determined number of substantially vertical rows comprising: a hopper for holding objects in horizontal parallel alignment; spaced parallel substantially vertical walls fixed beneath said hopper for receiving objects by gravity therefrom and arranging objects horizontally in substantially vertical rows, horizontally reciprocable pusher slats in horizontal alignment with said rows, and means for reciprocating said slats to push a pre-determined number of objects from each vertical row into a receiving means upon each excursion of said slats.

Device for Filling and Emptying Tubular Magazines, for Example, with Filled Caps and the Like, E. J. Jonsson, Linkoping, Sweden. U.S. 2,682,986, July 6. Apparatus for handling caps for containers comprising, in combination, a tubular magazine adapted to be filled with caps, a tubular base underlying and supporting said magazine, a removable adapter sleeve interconnecting the magazine and base whereby a continuous passage is provided between magazine and base through which caps are free to pass.

Container for Frozen Products, E. E. Spiess, Jr. (to National Dairy Research Laboratories, Inc., Oakdale, Islip, N.Y.). U.S. 2,683,987, July 6. A container for a frozen product which is to be kept solidified, container being convertible between a first form having good thermal insulating properties throughout and a second form having heat-transferring panel covering substantially an entire surface of container.

Handled Carton, J. D. Crary (to Paper Strap, Inc., Portland, Ore.). U.S. 2,682,990, July 6. A flat folded carton blank comprising a pair of side walls and a pair of end walls, one pair of opposite edge portions of each of side walls being hingedly connected to corresponding adjacent edge portions of both of said end walls defining a collapsed tubular unit.

Method and Apparatus for Applying Rip Strips to Wrapping Sheets, J. W. Smith (to Battle Creek Bread Wrapping Machine Co., Battle Creek, Mich.). U.S. 2,683,401, July 13. Laminating structure comprising means for advancing a web longitudinally of its length, a pressure plate extending transversely of said web and reciprocable transversely with respect to the plane thereof, a movable knife extending transversely of said web on the opposite side thereof from said pressure plate and reciprocable with said pressure plate, a fixed knife extending transversely of web and having a flat edge opposed to said pressure plate to clamp said web against said pressure plate when said pressure

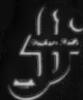
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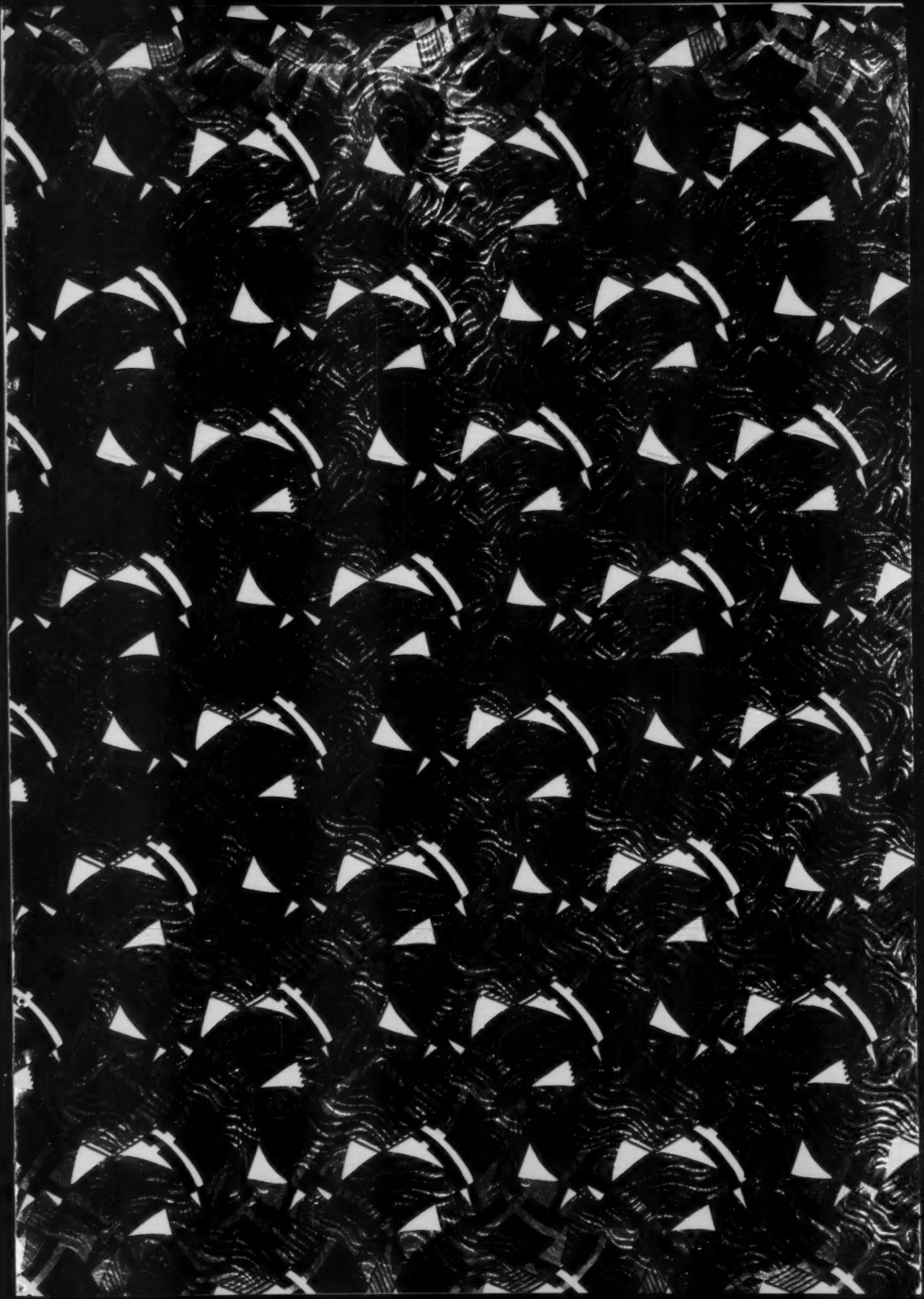
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(Continued from page 196)

plate is advance to said fixed knife, movable knife having cutting engagement with an edge of fixed knife, and means for delivering a second web between said knives and across the flat edge of fixed knife; the method of attaching rip strips to sheets of wrapping material in above machine comprises the steps of continuously advancing a web of wrapping material, intermittently advancing a web of strip-forming material of greater width than wrapper web and in parallel spaced relationship to wrapper.

Dispenser Carton, G. E. Wauda (to Marathon Corp., Rothschild, Wis.). U.S. 2,683,529, July 13. Cover-retention and opening means for a dispensing carton for dispensing of a roll of sheet material, said carton including front, bottom, rear and end walls, a cover hingedly connected along one edge of said rear wall, a cover flap hingedly connected to opposite edge of cover and a knife edge connected along upper free edge of front wall to permit severing desired lengths of said dispensed sheet material.

Hardware Package and Display, R. C. Seyforth (to The Shelby Metal Products Co., Shelby, Ohio). U.S. 2,683,530, July 13. A hardware display package comprising a loop-type door handle, a coiled door spring, a display card having a face portion, means operative to secure said handle to card with loop thereof projecting outwardly from face portion, an opening in card spaced from the thus-secured handle intermediate the ends thereof, central portion of spring being disposed on card between handle and opening.

Label-Picker Apparatus, M. H. Schiemel and C. H. Schwartz (to Jos. Schlitz Brewing Co., Milwaukee, Wis.). U.S. 2,683,548, July 13. In a label-applying apparatus the combination comprising conveying means for successively advancing a series of packages in guided spaced relation, a pair of picker blades having substantially co-planar picker surface areas separated by a transverse gap adapted to support labels extending between said picker surface areas by adhesive contact with label margins, said picker blades being reciprocably mounted for movement substantially within a path of action confined to a single plane between a label picking position in which a label is transferred to said picker surfaces and a label-applying position wherein a package successively advanced by conveying means will intervene between blades.

Stamping or Labeling Machine, S. R. Phin and D. A. Caulford (to Phin Sales Co., Toronto, Ont., Canada). U.S. 2,683,549, July 13. A machine for labeling containers comprising, in combination, an endless carrier to conduct a container in linear straight-line motion through a machine, a support structure mounted for vertical adjustment above carrier, label-applying means mounted on said support structure and moving at the surface speed of said carrier to bring adhesive face of a label into contact with a container deposited on said carrier.

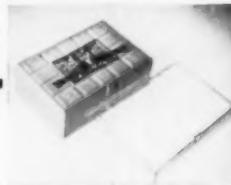
Packaging Machine, R. S. Jenney (to Kellogg Co., Battle Creek, Mich.). U.S. 2,683,557, July 13. A packaging machine for packaging an article in a carton, comprising an endless conveyor for carrying an article forwardly in a pre-determined direction, means for moving said conveyor, gate means disposed adjacent the delivery end of said conveyor for releasing said article carried forwardly from conveyor, a packaging station in alignment with conveyor, reciprocating pusher means for moving released articles in a direction aligned with conveyor into station, a package form positioned in said station to receive the article moved in said station, means for moving said package form from said station transversely to path of movement of article into said station and means for transferring said article from said package form to a carton.

Air-Operated Bottle-Closing Apparatus, J. Staller, Erlenbach, near Zurich, Switzerland. U.S. 2,683,559, July 13. Apparatus for applying a closure cap to a container such as a bottle or the like to seal the same, comprising, in combination, a support extending along a pre-determined axis along which a container to be closed is adapted to be located when a closure cap is applied thereto.

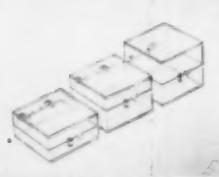
Container Adapted for Food Products, C. D. Rice (to Sutherland Paper Co., Kalamazoo, Mich.). U.S. 2,683,561, July 13. In a container, the combination with a tray-like body member adapted as a baking dish and having a bottom, side and end walls; side and end walls extending upwardly and outwardly from bottom, end walls having projecting tapered dovetailed tongues on their upper edges; a collapsible cover comprising a top, side and end walls hingedly connected thereto.

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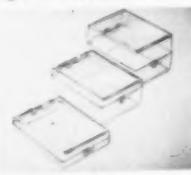
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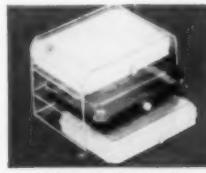
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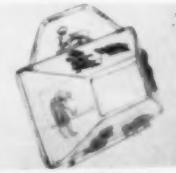
2w, 3w, 4w,
1 1/4" Hinged square inside
1/2, 3/4, 1" high, clear or tutone



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CARTON SET-UP MACHINES are operated by one attendant, who keeps carton chutes and tray holders filled with a reserve supply of empty packages for the two lines operating at the Modesto, Calif., plant.

Mechanical handling of eggs

An electro-mechanical egg machine that sizes, sorts, shell-protects, counts and packages eggs automatically at a speed of 360 cases (10,800 dozen or 129,600 eggs) in an 8-hr. shift is in operation at the Modesto, Calif., branch plant of the Poultry Producers of Central California. Handling eggs mechanically on this new machine is reported to have these advantages: it is fast, accurate and economical to operate. Two units are op-

erating at Modesto and more will be installed at other PPCC plants.

The packaging area has 12 egg-tray packaging stations and six dozen-size-carton packaging stations. One attendant easily keeps the egg-tray magazines and the dozen-size-carton chutes filled with an ample reserve supply for packaging.

The machine's "Memory System" automatically separates the individual eggs into 48 different classifications



PACKAGING AREA shows eggs in conveyor cups from right to left. Automatic switches open cups, releasing eggs and gently depositing them in their proper position into either cartons or trays. Filled packages are automatically moved out. Attendant places filled trays into cases. Cartons are automatically conveyed through closing machine to the casing area.

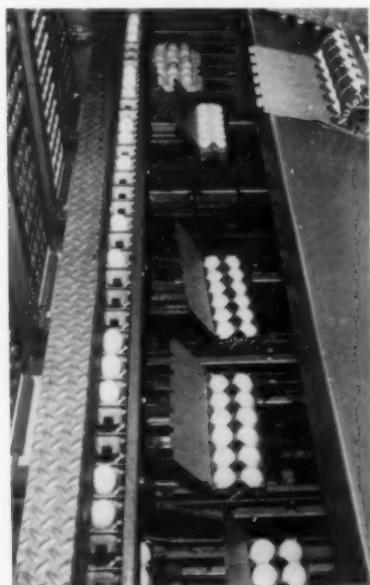
before they reach the packaging area. They are candled for eight different quality separations (AA, A White, A Brown, etc.). In addition, six separate weight separations (Jumbo, Extra Large, Large, etc.) can be made automatically. As the eggs are conveyed to the packaging area, they pass through the shell-protector, where any of the 48 combinations of eggs can be protectively coated or not, as desired.

The Memory System is set up to know in which station each of the 48 combinations of quality and size is being packed. When an egg reaches its appropriate station, a selector switch automatically opens the conveyor cup and the egg is rapidly but gently deposited in its proper place in the carton or egg tray. The Memory System then moves the package, row by row, at the exact moment, discharging it when full and replacing a new package promptly without delaying the delivery conveyor.

One packaging-station attendant places egg trays into cases or half-cases. Cartons are moved automatically to take-away conveyors, through an automatic carton closer and code dater to a station where they are placed into cases. Automatic take-away conveyors move filled cases to an automatic closer and sealer which seals both top and bottom of cases and code dates them.

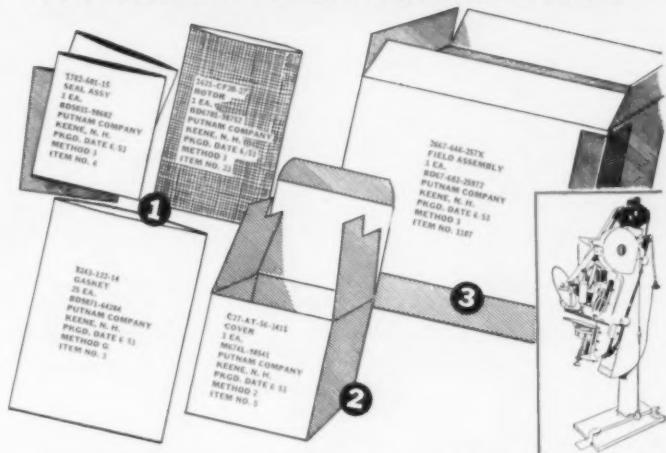
CREDIT: Egg machine, Food Machinery & Chemical Corp., Packing Equipment Div., Riverside, Calif.

TOP VIEW of egg delivery conveyor.



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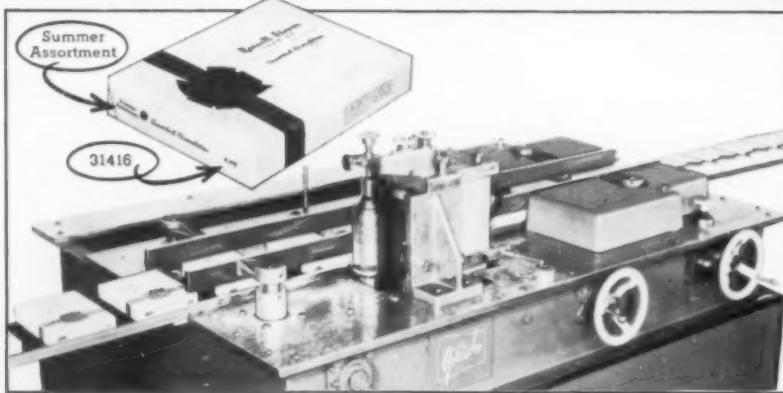
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SIPMHE show

Industrial packaging engineers from all sections of the country will gather in Chicago's Coliseum this month to view exhibits of the latest developments in packaging and materials-handling equipment at the Ninth National Industrial Packaging and Materials Handling Exposition. The event, sponsored by the Society of Industrial Packaging & Materials Handling Engineers, is being held again this year in conjunction with the National Packaging and Materials Handling Competition, in which prizes are awarded to those whose protective packages and materials-handling techniques are adjudged best. Dates of the exposition are Sept. 28-30.

Another highlight of the industry's annual gathering is the Short Course Educational Program, sponsored this year by the Department of Mechanical Engineering of the University of Illinois. The program is divided into three sections: Packaging Fundamentals, under the chairmanship of J. F. Carrigan, Spiegel, Inc.; Materials Handling Fundamentals, headed by A. R. Vaughn of Kraft Foods Co.; Special Management, headed by Walter J. Byrd of Standard Brands, Inc., J. L. Ware of American Excelsior Corp., and K. J. Trigger and N. A. Parker of the University of Illinois College of Engineering. Special emphasis is being placed on the subject of cost reduction, with speakers scheduled to discuss cost cutting in the fields of materials handling, packaging and shipping. Members of the Packaging Machinery Mfrs. Institute will present a "Packaging Machinery Review."

Particularly helpful in planning this year's program are the results of a survey made by SIPMHE of its national membership to determine the preferences of the society's members. The survey produced a number of suggestions for types of exhibition halls, show hours, plant tours, banquet programs, etc. A most significant result of the survey indicated that 54% of the membership influences purchasing, in a national breakdown that included manufacturers, retailers and wholesalers.

There has been a progressive increase in member attendance at the triple-feature event since 1946, when the first annual show was sponsored by SIPMHE, and indications are that the current one will be the largest yet.

Keep your products on the move with ...

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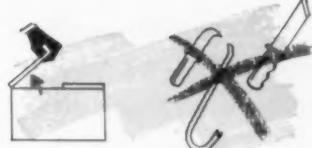


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SWIFT'S EASY OPEN adhesive seals cases rapidly and efficiently on the highest speed lines . . . yet the bond can be quickly and easily broken without tools, broken finger nails, strained backs or damage to the case. Here's what this can mean to you . . . and your product: Properly applied, EASY OPEN won't tear or stain carton stock . . . cases can be reused or put to work as displays. Busy merchants will tend to open easily opened cases *first* . . . good insurance for quick turnover and product freshness. And it's ready to use—no additional equipment or converters are needed to put Swift's EASY OPEN to *work* for you.

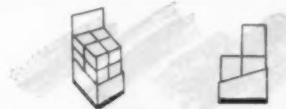
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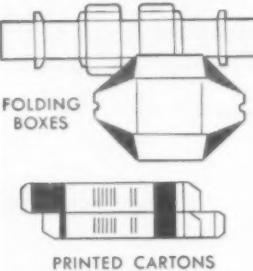
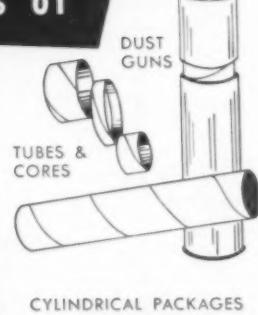
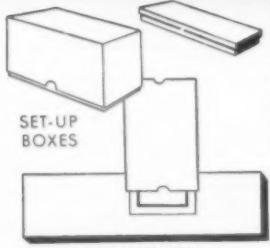
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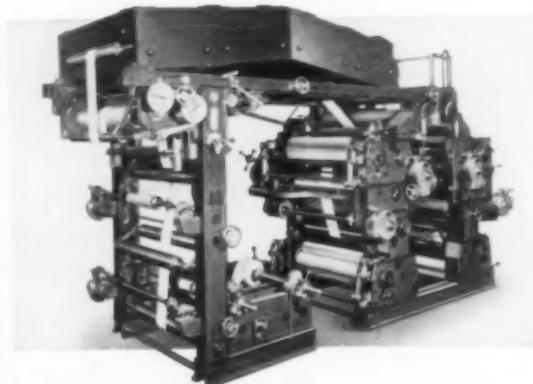
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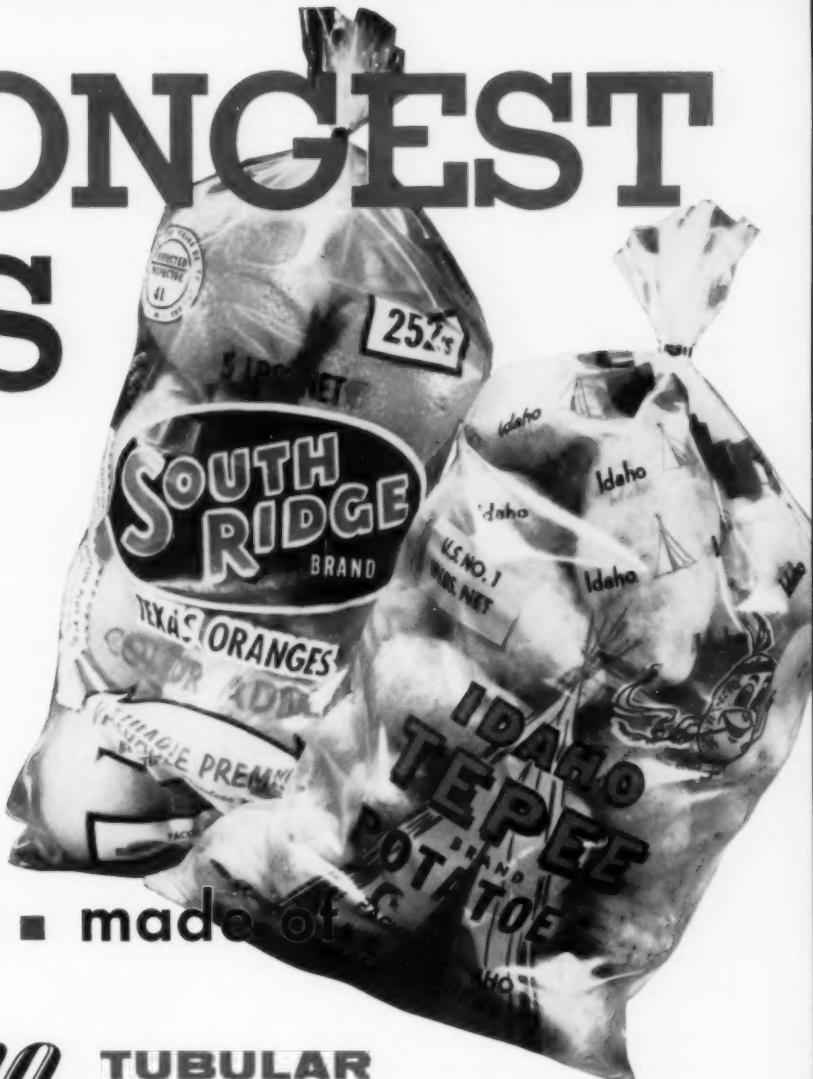
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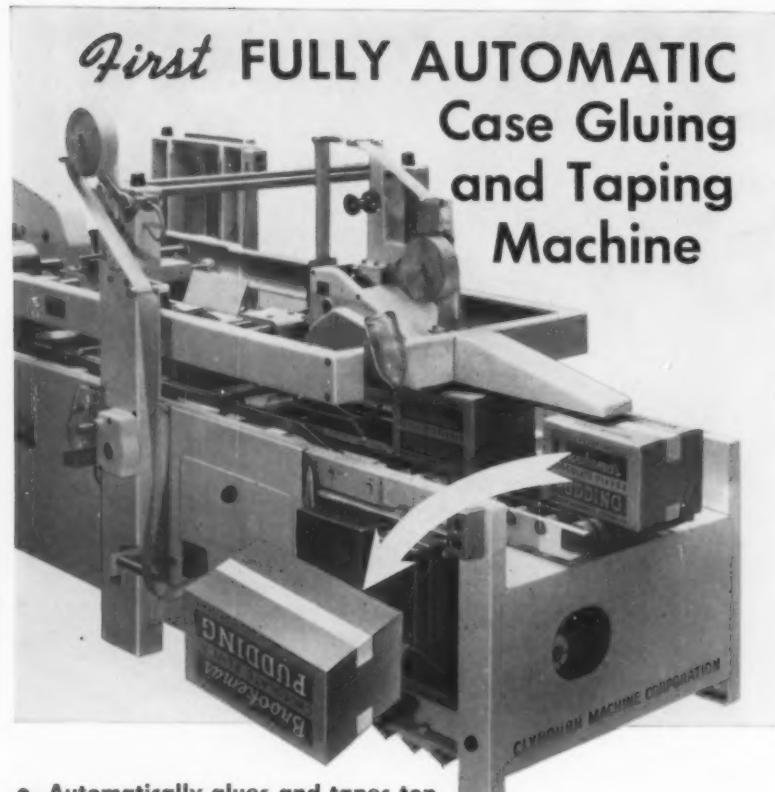
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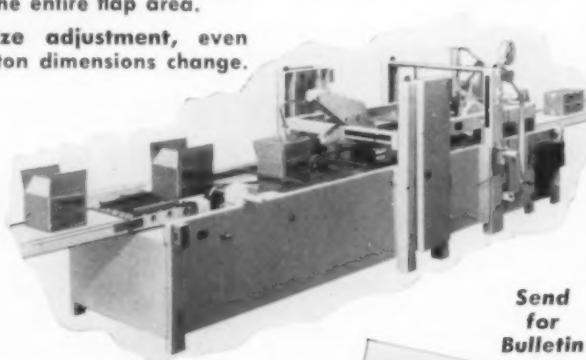
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Flexible bag sizes

A recommended list of polyethylene stock bag sizes has been released by a committee of the National Flexible Packaging Assn. which cuts the presently used 78 sizes down to 10 sizes which are believed adequate for well over 75% of present market requirements. The proposed stock bags are limited to sizes, either unprinted or printed in stock designs, which would customarily be carried in stock for immediate shipment.

The sizes recommended are intended for industrial or institutional packaging at the local level, although in some instances they may coincide with resale bag sizes. The gauge designations are believed to be adequate for the handling needs of store-level packaging. They may or may not be satisfactory for source packaging and shipping. Only square bag constructions are included and all dimensions listed are inside dimensions.

Following are the suggested simplified sizes, together with recommended gauges of film and typical uses:

4 by 1 by 7 in., 0.00125 gauge, for 6 or 8 oz. of topped radishes.

4 by 2 by 8 in., 0.0015 gauge, for three lemons or pint liner.

4 by 2 by 12 in., 0.0015 gauge, for 1 lb. carrots or quart liner.

4 by 2 by 13 in., 0.0015 gauge, for six lemons or 2 lbs. plums.

5 by 3½ by 13 in., 0.0015 gauge, for 12 oranges 288 or 344, or for 3 lbs. onions.

5 by 3½ by 16 in., 0.0015 gauge, for 3½ lbs. apples, six oranges 176 or 200, 12 oranges 252, or 12 tangerines.

6 by 3½ by 15 in., 0.0015 gauge, 5 lbs. white potatoes, three large grapefruit, frying chicken or cut-up poultry.

6 by 3½ by 17 in., 0.0015 gauge, 5 lbs. apples or 8 lbs. potatoes.

6 by 4 by 18 in., 0.0015 or 0.002 gauge, 7 lbs. apples or six large grapefruit.

8 by 3 by 20 in., 0.0015 or 0.002 gauge, 8 lbs. apples, 10 lbs. white potatoes or onions.

In the case of 10 lbs. of potatoes or onions, some members of the committee felt that 0.0025 gauge would be preferable, or possibly 0.003. To resolve this problem, the Department of Agriculture has been requested to conduct loading and shipping tests to determine what gauge will insure reasonable performance at minimum cost.

Several committee members will test a bag size of approximately 6 by 4 by 10 in. for lettuce and opinions on

for a better bread wrap...all around



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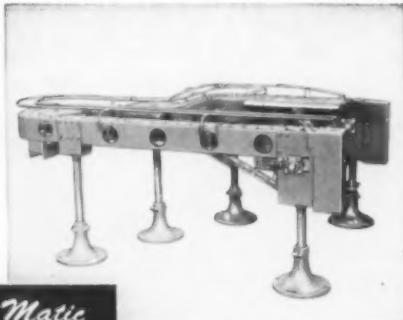
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SECOND...to learn the seven danger signals that may mean cancer, and go straight to the doctor at the first sign of any one of them—(1) Any sore that does not heal (2) A lump or thickening, in the breast or elsewhere (3) Unusual bleeding or discharge (4) Any change in a wart or mole (5) Persistent indigestion or difficulty in swallowing (6) Persistent hoarseness or cough (7) Any change in normal bowel habits.

For other life saving facts about cancer, phone the American Cancer Society office nearest you, or address your letter to "Cancer"—in care of your local Post Office.

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this matter are requested from the industry.

It was pointed out that while the committee believes that the converting industry would be well advised to adopt this schedule of recommendations, no one is under any compulsion to do so or to refrain from making other sizes for which he believes an adequate repetitive market exists.

The 10 bag sizes recommended are suited also to many other end uses.

Aerosol dusts

(This article continued from page 101) conventional difficulties like balling of dry powders which jam sifter-type dispensers can be pretty well discounted.

"Dry" graphite lubricants in aerosol cans, for general use in lubricating such friction parts as automobile springs, have also recently become available. Some of these, however, use a slight amount of oil as a sticking agent. Another material which is just reaching the market in a successful dry powder aerosol is molybdenum disulfide, used for lubricating various close-tolerance mechanisms. At the present time, successful commercial applications appear to be limited to the three instances mentioned.

A Chicago loader, although he has not yet reached the market with dry aerosols, is experimenting with various types of products such as a dusting powder, insecticides and decorative powders used in the floral trade. This company is using a valve of plastic construction and finds that a combination of a large valve opening and a very fine-mesh powder will give good results as long as the can is agitated during spraying.

This company uses a cold-fill technique with a 50-50 combination of "Freon-12" dichlorodifluoromethane and "Freon-11" trichloromonofluoromethane. The "Freon" does not combine with the powder, but produces a powder suspension and slightly dampens the powder prior to evaporation.

Experimenters see advantages in dry aerosol insecticide powders that can be applied directly to the skin of animals, avoiding the problem of DDT liquid aerosols which would bring kerosene into direct contact with the skin. For some products, such as rose dust, the powder form may provide more effective coverage, since liquids tend to run off as soon as they touch

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the surface of the plant, while a powder will adhere.

Brightest prospect for the aerosol package so far as dry powders are concerned is reported to rest in the fact that it is the only self-pressurized method of dispensing totally insoluble powders at the present time.

Powder formulations which would be even partially soluble in the carrier or propellant would not be satisfactory for aerosol application at the present time, it is stated, because of their tendency to agglomerate when moistened or, in some cases, when subjected to changes in temperature. Agglomeration, or clumping together of powder particles in a mass larger than the original particles, and sometimes accompanied by a change in the physical structure of the chemical molecules themselves, causes clogging of the fine orifices of the aerosol valves and dispensing heads or leakage of the propellant through incomplete seating and closure of the valve when the product is not in use.

Generally, however, an admitted problem with dry aerosols is cost. They do not have the same basic economy factor as some liquid and foam aerosols. Some reports say that only about 15 to 20% of the material in the can is powder; the rest is propellant. Distinctly more effective function of the product in pressurized application will be required to justify a cost which may run to two to three times that of a conventional package.

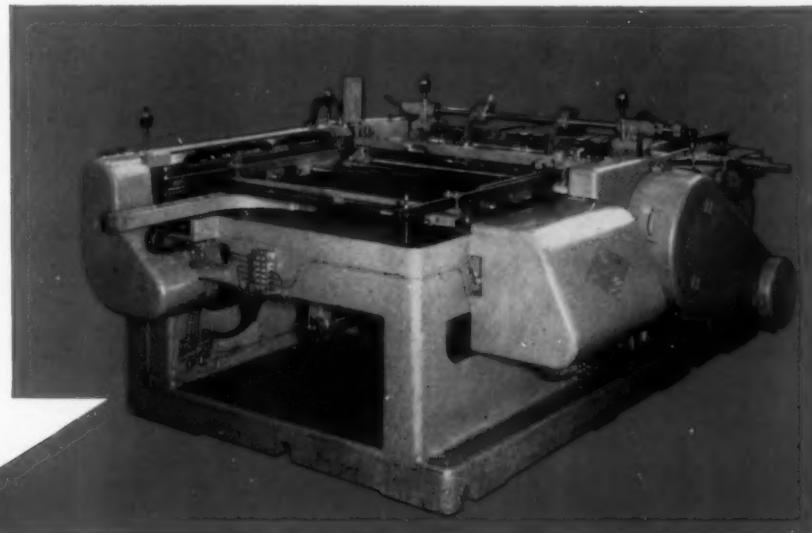
Nevertheless, the new field is the subject of intensive research at the present time. One of the most important companies in the aerosol industry reports that it has satisfactorily packed, in its own laboratory, such powders as talcum and antibiotics and has concluded that dry powder aerosols are entirely practical provided that particle size is not so large as to cause clogging in current models of valves. Considerable study, however, must be made of each potential application, with particular emphasis on shelf life of the package.

Others feel that a new and special type of valve will be required to make dry aerosols fully practical.

CREDITS: I. M. S. Zinc Stearate Dry Powder Spray developed and loaded by Eveready Pressurized Products, Inc., 1022 Belt Line St., Cleveland 9, using Du Pont Freon propellant. Valves by Aerosol Research Co., Forest Park, Ill. Cans by Crown Can Co., Erie Ave. and H St., Philadelphia 34.

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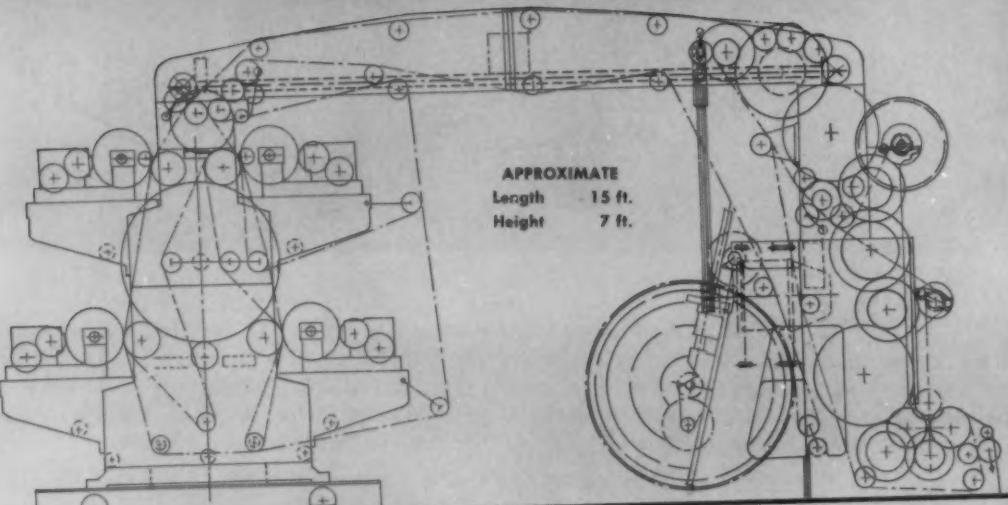
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PRINTED TAPE FOR INDUSTRIAL USES. Folder illustrates varied uses of industrial tapes, such as parts marking, product identification, textile coding, package sealing and point-of-purchase promotion most effective. Merit Displays Co. (I-452)

HANDLING BULK MATERIALS. Booklet describes how the "Tote System" saves money on the handling of bulk materials. Data on Tote storage bins, tilts, screw feeds, and various other handling machines. Cost analysis shows savings with typical materials. Tote System, Inc. (I-453)

AUTOMATIC CARTON TAPING MACHINE. Data on an automatic machine which securely seals up to fifty cartons per minute without the use of glue so the cartons may be knocked down for re-use. Wagner Iron Works. (I-454)

MARKING EQUIPMENT. Handbook contains important data on the uses and care of marking equipment. Information on stencils, inking brushes, stencil cutters and other marking equipment manufactured by Marsh. (I-455)

"VISKON" NONWOVEN FABRICS. Booklet contains samples of "Viscon" nonwoven cotton and rayon fabrics which are heat sealable, exceptionally porous, wet strength and sanitary for food packaging applications. The Viskin Corp. (I-456)

PACKAGING ADHESIVES. Chart lists Borden's adhesive and specialty products used for bag seaming, case sealing, folding boxes, labeling, and paper laminating. Gives trade names, formulas, methods of application and outstanding properties of each. Borden Company. (I-457)

ENVELOPE MANUFACTURE. A forum-in-print explains the steps taken by this company to assure the purchasing agent, the printer and the users satisfaction with their envelopes. U. S. Envelope Co. (I-458)

AUTOMATIC CRATE ASSEMBLER. Folder on an automatically operated machine for assembling plywood crates into four basic styles from pre-fabricated "Fly-Fold" crate sections. Atlas Plywood Corp. (I-459)

RADIANT HEAT PANELS. Data on "Chromalox" far-infrared radiant heat panels for speeding the drying of inks, glue, paper varnishes, and silk screening. Edwin L. Wiegand Co. (I-460)

ALUMINUM DRUMS. Folder describes thirteen aluminum drums which can be used for a wide range of shipping requirements. Gives four cost-saving advantages of these drums. Reynolds Metals Co. (I-461)

PRESSURE SENSITIVE LABEL DISPENSER. Folder on a new high speed label dispenser for pressure sensitive labels. Includes specifications and illustrations of typical pressure sensitive label designs. A. M. Steigerwald Co. (I-462)

PACKAGING EQUIPMENT. Brochure gives descriptions and features of six automatic packaging machines for bundling, banding, stamp affixing and high speed wrapping. Scandia. (I-463)

ADHESIVE FOR POLYESTER FILM. Leaflet covers a full range of adhesives for use with "Mylar" to paper, to aluminum foil, to steel, to vinyl, and to polyethylene are described. Flexibility, complete clarity and resistance to heat are their outstanding characteristics. Rubber and Asbestos Corp. (I-464)

PLASTICS FOR PACKAGING. Booklet illustrates various Bakelite plastics used in package making. Discusses packages made of molded and blown plastics, coatings, adhesives film and rigid sheet materials. Bakelite Company, Div. Union Carbide and Carbon Corp. (I-465)

FLUORESCENT BREAD LABELS. Sample and labels for bread, utilizing fluorescent "Day-Glo" papers in several colors. Pollock Paper Corporation. (I-466)

STAPLING MACHINES. Brochure covers the features of thirteen motor and foot operated stapling machines. Lists suitable staple sizes for different packaging operations. Bostich. (I-467)

HEAT-SEAL PACKAGER. Folder details the operation of the Packmaster Model 50, which fabricates, fills and seals packages

from heat-sealable materials, prints and counts them at speeds from 30 to 80 complete packages per minute, depending upon the materials. Packmasters. (I-468)

DRUM HANDLING EQUIPMENT. Bulletin illustrates a large assortment of drum cradles, trucks, rotators, slings, and fixtures to facilitate the use and handling of fibre and metal drums of all sizes up to 110 gallons. Morse Manufacturing Co. (I-469)

EXCELSIOR CUSHIONING. Modern Packaging reprint covers the applications of pre-formed excelsior wraps for shipping fragile and bulk products. The excelsior pads reduce breakage costs and expedite packaging operations. American Excelsior Corp. (I-470)

SETTING-UP MACHINE FOR GLUE LAP BOXES. Data on a duplex automatic machine for setting-up conventional glue lap boxes and covers at high speed. Inman Mfg. Co. (I-471)

BAG MACHINES. Brochure gives fifteen illustrations on the operation of the "Matador" Models 26, 31, 34, 50. Gives specifications for flat and square bag making machines and for "Alina X" a-line end printers. H. H. Heinrich, Inc. (I-472)

FILLERS FOR STILL AND SEMI-LIQUIDS. Data on the Horix fully automatic rotary, semi-automatic and hand-operated fillers for still liquids. Information on speeds, containers and products handled, and method of filling-gravity or gravity-vacuum. Horix Mfg. Co. (I-473)

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PRESSURE SENSITIVE TAPES. Samples and description of eleven industrial tapes. Enumerates tape backing, thickness, adhesion and tensile strength. Hampton Manufacturing Co. (I-474)

GLASSWARE FOR DRUGS. Illustrated catalog gives complete purchasing data on company's "Moderne" line of vials, applicator bottles, powder and ointment jars and closures designed particularly for pharmaceutical products. Foster-Forbes Glass Co. (I-475)

MARKING AND SEALING MACHINE. Folder describes the Soabar Model 10 "Thermoply" which marks and attaches heat seal labels to soft goods and cellophane packaged merchandise. Soabar Co. (I-476)

"SHADOGRAPH SCALES." Data on scales which use the "Shadograph" principle to eliminate inaccurate reading of weights. Describes six different types of scales using this principle. The Exact Weight Scale Co. (I-477)

STOCK PLASTIC BOXES. Catalog illustrates and gives dimensions of seventy-five rigid boxes, available in clear and colors without mold cost, plus a number of formed acetate domes and slide cover boxes. Oppenheim Co. (I-478)

CONTINUOUS UNWINDING AND WINDING EQUIPMENT. Bulletin on the operation of the Dilts "Ferrisplice" continuous unwinder, and "Surfastart" continuous winder for use with printing presses and bag machines running cellophane, acetate and glassine rolls and affording continuous operation through continuous roll changes at full speed. The Black-Clawson Co., Dilts Machine Works Division. (I-479)

BUNDLE TYING EQUIPMENT. Brochure describes the "Wiretyer" that automatically bundles and ties cartons, boxes and stacked flat products. Includes descriptions, features and specifications of this new unit. Wiretyer Corp. (I-480)

CONTAINER TESTING. Information on the complete laboratory service for testing containers and materials, packaging research, package design and specifications, and quality evaluation programs. Container Laboratories Inc. (I-481)

HEAT SEALING UNIT. Folder describes the Great Lakes CS 17 power driven heat sealing unit which handles a wide variety of packaging applications and which can be combined with a scale to form a complete meat pre-packaging unit. Great Lakes Stamping & Mfg. Co. (I-482)

ELEVATING LABELERS. Brochure covers the advantages of Chisholm-Ryder Series E labelers for round cans, glass jars, fibre containers, and other cylindrical cans or jars. Units are designed with low in-feed and high discharge height. Chisholm-Ryder Co. (I-483)

AUTOMATIC ROLL SHEET CUTTER. Booklet lists five models of the Beck Roll Sheet Cutters, their general features and operations. Lists numerous sheet cutter attachments used in conjunction with these machines. Charles Beck Machine Corp. (I-484)

ELECTRIC LABEL DISPENSER. Data sheet with information on the specifications and use of an automatic dispenser to speed hand application of "Kum-Kleen" pressure sensitive labels. Avery Adhesive Label Corp. (I-485)

CANE FIBREBOARD CUSHIONING. Brochure illustrates how fabricated sections of Celotex industrial cane fibreboard cut packaging time and provide ideal suspension for engines, machine parts, automotive components and other units which need protective packaging. Celotex Corp. (I-486)

POLYVINYL ACETATE FILMS. Technical bulletin tells how "Pycal" plasticizer can be used to improve the quality of polyvinyl acetate emulsions used as pressure sensitive adhesives, aluminum foil adhesives, cellophane and cellulose acetate adhesives and other similar applications. Atlas Powder Co. (I-487)

PRESSURE SENSITIVE PAPERS. Folder explains the uses and properties of Avery dry-adhering pressure sensitive papers, and shows how they can be used profitably for packaging a multitude of products. Avery Paper Co. (I-488)

FLOOR AND COUNTER DISPLAYS. Brochure illustrates the metal units many manufacturers use to display, dispense, and demonstrate their products in retail outlets. Advertising Metal Display Co. (I-489)

DEHUMIDIFIERS. Descriptive literature on Desomatic equipment for dehumidification of air. Lists methods of air cooling and circulation, and the various machinery involved in the operation. Daly, Merritt & Sullivan, Inc. (I-490)

STEEL SHIPPING CONTAINERS. Illustrated brochure follows the step-by-step processing of steel sheets, from shot blasting for removing rust, rolling for smooth surfaces, rinsing, spraying, and coating to curing of the sheets for eventual fabrication into steel shipping drums and containers. Rheem Mfg. Co. (I-491)

PACKAGING EQUIPMENT. Handy catalog illustrates and describes various machines used in packaging such as electric vibrators, hydraulic jolters, parts feeders, flow control valves, weighers, hopper level switches, and other packaging equipment. Syntron Co. (I-492)

AUTOMATIC PACKAGER AND PRINTER. Folder describes and illustrates the "Packmaster" Model 50 which counts, imprints and packages items in a square, flat, heat-sealed flexible container either singly or in "accordion" foldable strips. Packmasters, Inc. (I-493)

TWIST WRAPPING MACHINE. Information on the AMF fold and twist wrapping machine which automatically forms, cuts, twist-wraps or fold wraps rectangular or cylindrical shaped pieces at speeds up to 650 per minute. Gives specifications and illustrations of the unit. American Machine & Foundry Co. (I-494)

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Potato goes modern

(This article continued from page 146)

Recent statistics show that approximately 2,000,000 bushels of potatoes are pre-peeled annually. The industry's pattern of growth indicates that the market will be expanded far beyond this point, especially since penetration of retail outlets has only begun.

Other developments

While polyethylene film has created most of the recent excitement in potato merchandising, several of the older, more established materials, including kraft paper, mesh and window bags, have kept pace by offering new constructions easier to handle on production lines and by providing branded bags and convenience features which help promote potato sales. It is interesting to note that in one study, solid kraft paper bags gave better protection against greening than any other type.²

For one thing, potato packages today are making better utilization of good design, with more pointed, informative copy to encourage sales. One supplier with a varied line of kraft and polyethylene bags is offering bags printed with potato recipes from the nationally known *Better Homes and Gardens* New Cook Book. Recipes for appetizing potato dishes are intended to stimulate sales in the stores and encourage greater use of potatoes in the home.

This promotion is apparently well aimed, on the basis of a report by the Produce Packaging Assn. that 76% of women shoppers prepare meals from suggested menus; 67% purchase specific products because a recipe is included with or on a package; 50% of supermarkets have recipe racks and have trouble keeping them filled; recipe ads get 56% higher "read most" than non-recipe ads. Recipes and menu suggestions, a time-proven stimulant on the packages for most processed foods, are at last catching up with at least one fresh-packed produce item—potatoes.

A type of carry-home bag favored by some growers is available in both mesh window and solid-face kraft construction, with a built-in handle, in 5-, 10- and 15-lb. sizes. When the bag is filled, closed and stapled, there are actually 10 plies of extra heavy paper which surround the handle area, pro-

² See "Comparison of Polyethylene With Various Other 10-lb. Bags," *American Potato Journal*, Feb., 1954, p. 29.



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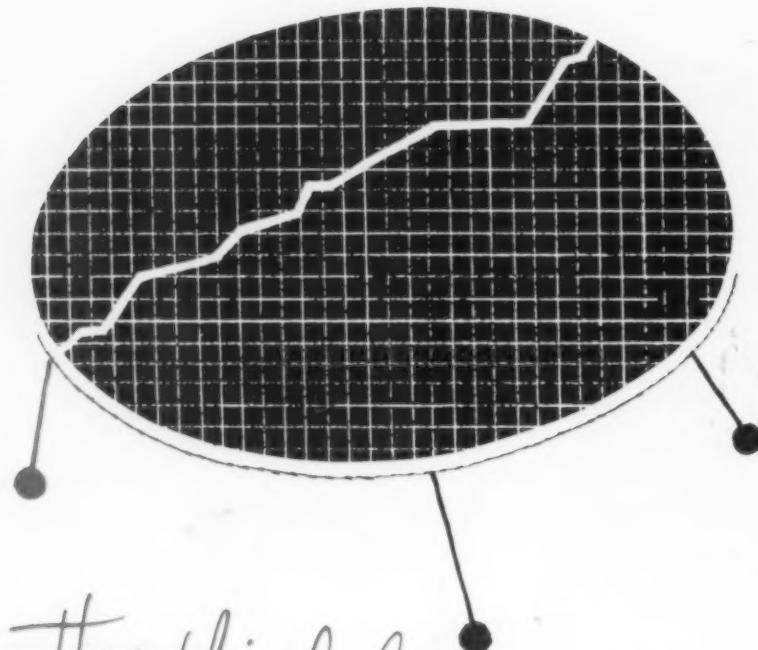
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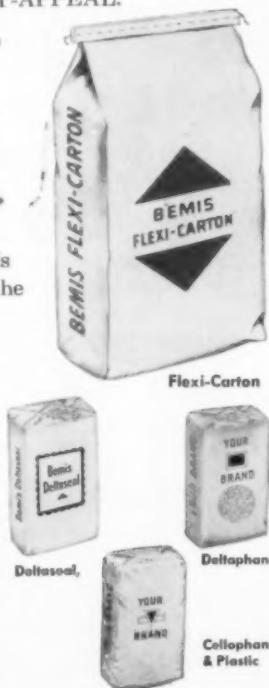
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viding a strong, sturdy, easy-to-grip handle that will support much more than the weight of the potatoes inside. Because these bags are designed to retain their neat, rectangular shape, they are said to load, stack, handle and square up better for shipping and display.

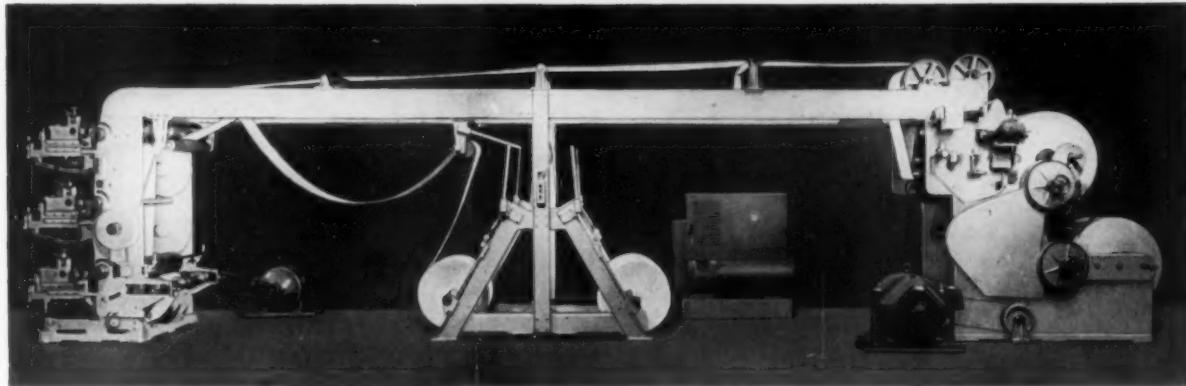
Production-line techniques for handling potatoes have been well formulated at the grower-shipper and terminal levels. Dakota Chief Sales Co., Franklin Park, Ill., is said in the trade to have one of the most highly mechanized potato-packaging plants in the world. A variety of bag styles and sizes is used with automatic hopper weighing and filling, and with conveyor-belt arrangements which carry the bags in a continuous sequence through staplers, sewing and heat-sealing machines, depending upon the type of bag. Speeds up to 2,000 10-lb. bags per hour are reported.

Equivalent speeds are said to have been achieved by the Baker Produce Co., Kennewick, Wash., in a continuous-sequence packaging line. Potatoes are fed from a hopper into individual bags attached to weighing scales which move in a circle around a track. The bags are check weighed and then dropped on another conveyor leading to a closing machine.

There is a limited amount of packaging of potatoes at the retail level—sometimes using stores' own brand names—but industry spokesmen believe that this will one day be taken over entirely by growers and shippers, who can usually do it more efficiently and economically. A good deal of semi-automatic equipment is available today, however, for supermarket and small-grower operations. A portable two-header bagger, one of the newest types of such equipment, is helping to reduce costs and increase production for a number of operations; one person can operate both heads and the hopper can be divided to bag two different types of produce simultaneously if desired. In larger operations, 20-station bagging tables are commonly seen.

Packaging potatoes in branded, consumer-sized packages is now an established practice. Several different types of packaging materials are being used successfully and the added conveniences of washed and peeled potatoes are creating new sales opportunities for the ubiquitous spud. Above all, packaging has turned the tide of sales reverses for the industry.

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Picture packs

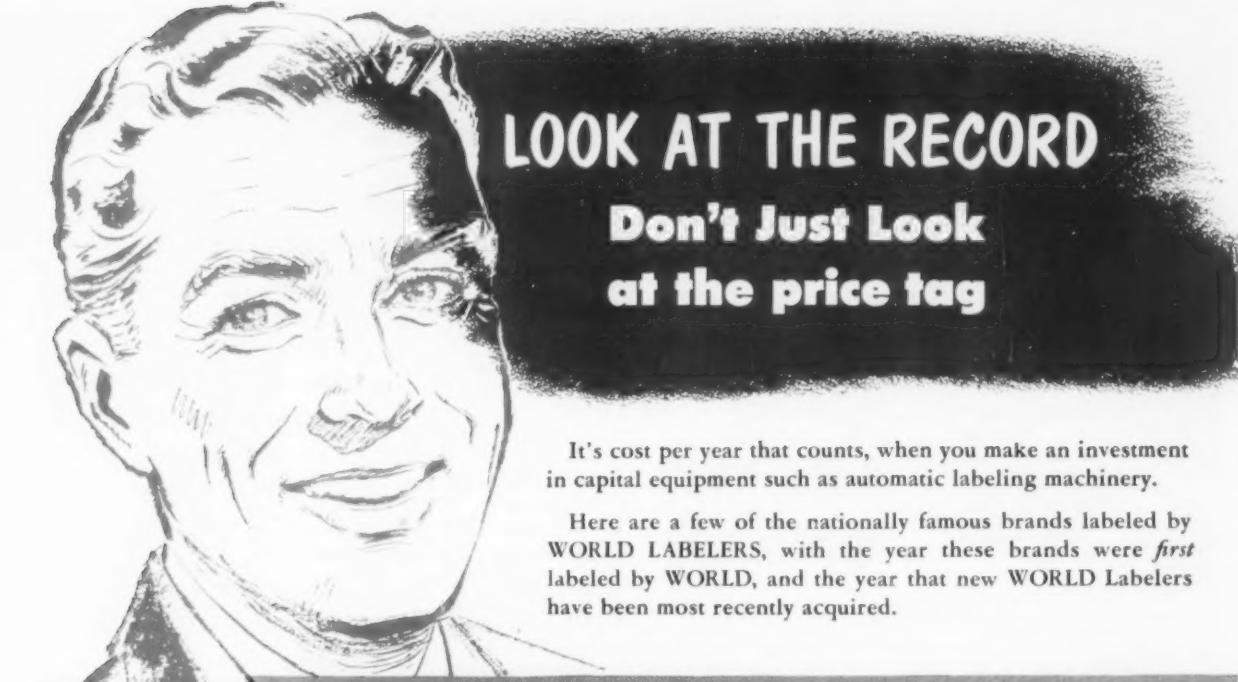
(This article continued from page 99) lustration of dates so realistic they look as though you could pick them up and eat them. Vignetted is a mouth-watering reproduction of a plate of date spice cup cakes which can be made with the dates. The recipe is given on the reverse side of the wrap.

Cost of color

Obviously, full-color printing on cellophane is costly. Users and converters, however, in many instances have been able to effect economies through volume usage. The Casserole packages, as well as some of the rice packages, are possible, costwise, because of cooperative effort. The same artwork and roto cylinders for 18 packages merchandised nationally under the Casserole brand name are shared mutually by all members of the cooperative group, which brings the cost down to very little per member.

Similar arrangements for the use of artwork, roto cylinders, etc., have been worked out among some of the baking companies operating as subsidiaries or divisions of centralized managements, necessitating only minor printing changes for brand identity and company names. To aid smaller firms which do not have budgets for custom jobs, converters are offering full-color stock designs which provide ample space for each user's own trade identification. The currently popular hamburger and hot-dog roll wraps as well as several brown 'n serve roll wraps are available in this category.

In some quarters there is a feeling that too much emphasis is being placed on the pictorial appetite appeal of the package. One supplier maintains, for instance, that store surveys show that shoppers are more interested in price, quality and brand name than in pictures on the packages. A leading designer has said that pictures detract from trademarks. There may be some basis for this, if the pictures are not handled in a manner that sustains brand name. The success of literally thousands of pictorial packages that show illustrative treatment with strong brand identity would indicate, however, that quite the reverse is true. And more picture packages are appearing every day. The whole trend—as witnessed by the



LOOK AT THE RECORD

Don't Just Look at the price tag

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BEST FOODS.....	1923 & 1951	MONARCH FOODS....	1916 & 1953
BLATZ.....	1910 & 1951	NATIONAL FRUIT PROD.	1916 & 1953
BLUE PLATE FOODS....	1917 & 1951	PABST BLUE RIBBON....	1905 & 1953
BORDEN.....	1918 & 1952	POND'S EXTRACT.....	1909 & 1953
CALVERT.....	1937 & 1952	QUAKER MAID.....	1928 & 1954
CANADA DRY.....	1922 & 1954	REXALL.....	1909 & 1952
CARLINGS.....	1925 & 1953	RUPPERT.....	1908 & 1953
COCA-COLA.....	1918 & 1953	SCHENLEY.....	1911 & 1953
CROSSE & BLACKWELL.	1927 & 1951	SCHLITZ.....	1906 & 1953
FINAST FOODS.....	1927 & 1951	SEAGRAM.....	1934 & 1953
FOUR ROSES.....	1929 & 1952	TABASCO.....	1927 & 1954
GENERAL FOODS.....	1924 & 1951	HIRAM WALKER.....	1933 & 1952
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ELI LILLY.....	1908 & 1951	WHITE ROCK.....	1905 & 1954

Ask yourself whether the makers of products like these buy, and buy again, on the basis of price or performance.

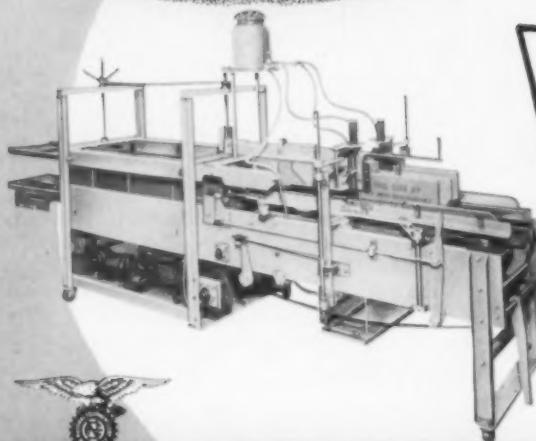
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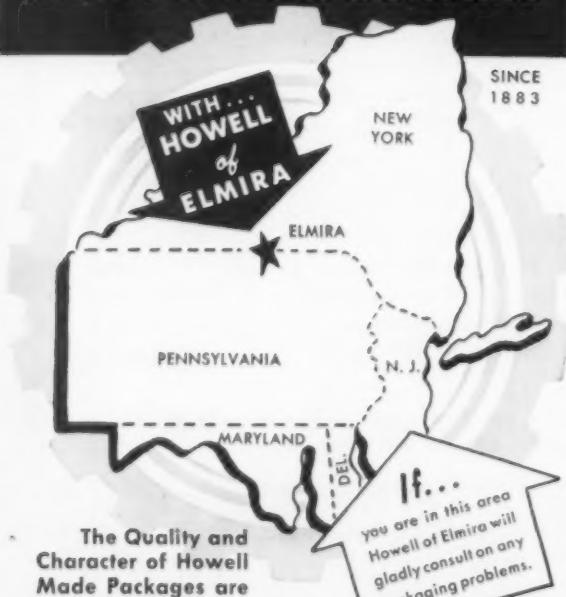
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See our Insert Advertisement in this issue.

remarkable advancement of color-printing techniques in the last decade—points to the use of more pictures—realistic pictures that look like or better than the fine-screen printing of food illustrations in the slick magazines.

Whether it's packaging or publishing, one is always reminded of the famous saying attributed to the late Arthur Brisbane: "One picture is worth a thousand words." And on a package, it can be worth many thousands of dollars in sales as well.

Built like a bee-hive

(This article continued from page 119) from the supplier. An operator opens the cone and places it on a mandrel, which revolves so that the weather stripping is wound mechanically on the cone. The ends are stapled to the cone. When the cone is filled, the band is added by hand and stapled to hold the weather stripping securely at the small end. The cones are then placed 12 to the corrugated carton ready for shipment.

In addition to the "bee-hive" packages, the new Inner-Seal line includes two square-carton packages for garage-door cushioning material which, because of its shape, could not be wound on the cones. While more conventional in appearance, these packs offer the same advantages of consumer use and make convenient display units with certain distinctive construction features that permit easy loading as well as customer examination of contents. Arc-shaped, die-cut openings provide a window in the face of the carton for viewing the product.

This feature was incorporated to discourage customers from removing the product from the carton and thereby causing annoyance to dealers in having to try to replace the 8- and 9-ft. lengths of garage cushioning in the cartons.

Bridgeport Fabrics, Inc., which reports it has sold 600 million feet of its Inner-Seal weather stripping, is giving its new packages wide support in the trade and in large-scale advertising this fall in nine national magazines, appealing to the "do-it-yourself" market. Reception of the new packages has already exceeded expectations.

CREDIT: Packages designed and produced by Cambridge Paper Box Co., 196 Broadway, Cambridge 39, Mass.

How functional can a paper bag be? When it has AMERICAN'S Kard-O-Pak construction and airtight, waterproof lining and colorful design showmanship, Turco Products, Inc., find that a paper bag is soundly functional, efficient, economical and salable for packaging its chemical compounds. Today, Kard-O-Pak bags by AMERICAN package five different Turco detergent products. From point of packing, to point of sale, to point of product use, Kard-O-Pak meets the Turco test for packaging its chemical compounds with "pay-off" dividends of sealed-in quality, customer satisfaction and better sales showmanship. It's the extra dividend of quality, efficiency and showmanship that will make paper bags by AMERICAN pay off for you.

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Accent on production

(This article continued from page 132)
per serving." These containers are packed in pairs in corrugated shipper, the packer taking care to see that both do not include the same food vignette.

With its new packages and its own new up-to-the-minute plant for producing them, Accent expects to remain in the forefront of packaging progress for some time to come. But, in line with the lessons learned, both production and design will be continuing subjects of study, open to new trends and improvements as they develop.

CREDITS: Equipment—Model C-8 "Vacu-Flow" automatic filling machine by Pneumatic Scale Corp., Ltd., Quincy 71, Mass. Unscrambler and cleaner by White Cap Co., 1819 N. Major Ave., Chicago 39. "Shadograph" check weigher and Model 1200 "Selectrol" automatic rejection unit by The Exact Weight Scale Co., 944 W. Fifth St., Columbus 8. Bottom seamers by Angelus Sanitary Can Machine Co., Los Angeles. Cellophane overwrapping machine by Scandia Mfg. Co., North Arlington, N. J. Conveyors by Island Equipment Corp., 27-01 Bridge Plaza N., Long Island City, N. Y. Packages—Fibre canisters with plastic dispenser tops by W. C. Ritchie & Co., 8801 Baltimore Ave., Chicago 17. Metal 4-oz. and 1-lb. cans by J. L. Clark Mfg. Co., Rockford, Ill. Metal 10-lb. canisters by National Can Corp., 3217 W. 47 Pl., Chicago 32. Glass jars by Owens-Illinois Glass Co., Toledo 1, Ohio. Plastic shaker tops and molded plastic shelf by Federal Tool Corp., 3600 Pratt Ave., Chicago 45. Folding counter-display cartons by Container Corp. of America, 38 S. Dearborn St., Chicago 3. "Deal" cartons by Morris Paper Mills, 135 S. La Salle St., Chicago 3. Low-tack pressure-sensitive tape by Permacel Tape Corp., New Brunswick, N. J. "Kimpak" cellulose padding by Kimberly-Clark Corp., Neenah, Wis. Corrugated containers by Atlantic Box Co., 2007 S. Marshall Blvd., Chicago 23. Robert Gair Co., Inc., 155 E. 44 St., New York 17, and Stone Container Corp., 4200 W. 42 Pl., Chicago 32. Printed folders, Printed Products Co., 537 S. Dearborn, Chicago. Redesign program—Walter Dorwin Teague Associates, 444 Madison Ave., New York 22.

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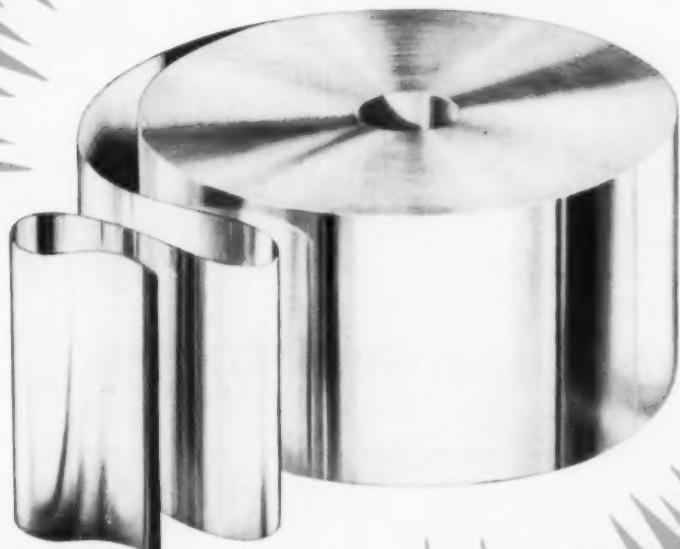
Most versatile slider-bed belt conveyor you can find.
10' to 80' lengths. Integrated Power-Pac
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SPECIALTY
COMPANY INC.**

27 Newport Avenue
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CORRECTION: Credit for the pressure-sensitive band used on the Diamond Crystal Weather-pruf Salt salt-shaker premium deal reported on page 108 of the July issue should have been to the Larido Corp., Premium Division, 381 Fourth Ave., New York 16.

Consistently Good!



VENESTA FOIL

A product of the Packaging Division

Venesta Limited, Vintry House, Queen Street Place, London, E.C.4, England. Cables: Venesta, London

SEPTEMBER 1954

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This newest, high speed partition machine takes the paper stock from *TWO* rolls of paper, slits, dies out and assembles the partition automatically in *ONE* operation with one operator.

Machine is adjustable for a wide range of sizes.

Send specifications or samples of partitions you wish to make. A specific proposal will then be furnished giving complete details.

SPECIFICATIONS

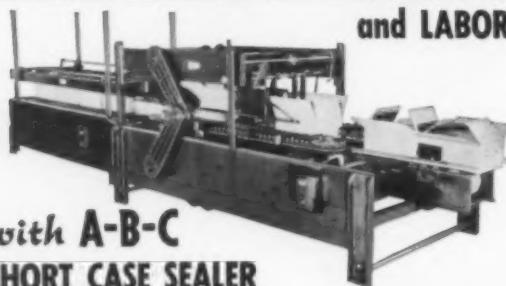
Floor Space..... 23' 6" long x 4' 3" wide
H.P. 2
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Range..... Up to 7" deep
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Price and Delivery upon request.

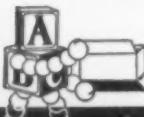
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Save two-thirds of your valuable floor space with the A-B-C Short Case Sealer—with increased packaging efficiency, more speed, less expense... Automatically glues, folds and seals either or both top and bottom flaps of shipping cases in one operation. Made in eight models to fit any production requirement. Hot air heaters dry the glue in one-half the time. Speeds up to 30 cases per minute.



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Whatever your packaging job, A-B-C has a production proved machine for you—case sealers, unloaders and unscramblers, side sealers, and hand gluers.

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Ask for case histories of special interest to your business.

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New Toledo Printweigh Scales meet your needs today for closer cost control! Stop human errors in reading, remembering, recording . . . provide accurately printed weights with split-second speed . . . accurately recorded!

Printweighs are available for dial type scales in the great new line of Industrial Toledos! 44 new features include . . . new clean-line design . . . double-pendulum mechanism in one-piece sector . . . lifetime fulcrum. Send for new condensed catalog No. 2001. Toledo Scale Co., Toledo 1, Ohio.



For practical assistance in the selection of new equipment—for efficient installation—or for dependable, factory-trained service, look to your local Toledo office as headquarters. Phone there for emergency repairs on all makes of scales. Ask about the economy and assurance of Toledo service agreements for regular, periodic inspection—"the ounce of prevention" that guards essential equipment.

TOLEDO
HEADQUARTERS FOR SCALES

Hardware

(This article continued from page 114) hand into a revolving turret which delivers them to a cellophane web. These parts do not find their way into retail hardware stores, but they do suggest how manufacturers of similar items can achieve fast, low-cost packaging.

In a field which is plagued by dozens of styles of any one product in hundreds of sizes, standardization of package sizes and types can be of great help in speeding production and much attention has been given to such standardization programs in recent years. Many economies have been effected also by the use of in-plant printing equipment and marking devices which permit the manufacturer to use a standardized assortment of cartons, envelopes and labels pre-printed only with trademark and basic information common to most of his products and to imprint variable data in his own plant. This often effects savings through larger-quantity buying and simplifies package inventory. Many of the in-plant printing devices may be made an integral part of the production line.

The hardware manufacturer is proving that he can adapt his packaging and merchandising thinking to the demands of today's self-selection selling. He has, in fact, developed techniques which manufacturers in other fields might well emulate. For despite the constant pressure to keep costs down and the curdling competition of the discount houses, there are many hopeful signs for the future of the hardware industry:

- There were 6,000,000 new homes built since World War II and the boom goes on.
- Home improvement activities are on the upswing. The U. S. Chamber of Commerce says that the probable expenditure will be \$6.8 billion and in all likelihood the figure can be pushed 30 to 50% higher.
- The do-it-yourself idea is leading millions of new customers to the hardware store.
- Houseware lines are being continually expanded and a big new outlet has been found in the self-service food store.
- More customers think of hardware products today in terms of gifts.

All of this means more hardware sales and the company with the right kind of packaging will have the edge.

MANY Styles AND Sizes



Anchor Amerseal® Caps are available in 18 sizes—20 to 120 mm., lacquered, coated or privately decorated. Cap offers ultimate in convenience for consumer in removal and reseal. A simple quarter-turn and it's off—a reverse quarter-turn and it's on again.

...THERE'S AN ANCHOR CAP FOR EVERY SEALING PURPOSE

ANCHOR HOCKING makes eleven styles of screw, lug, friction and vacuum closures for food products. Each is designed for specific sealing purposes—all provide dependable, economical, attractive and efficient seals.

For application of vacuum and friction caps, thirteen different types of Anchor Sealing Machines are available. They apply caps at speeds ranging from 20 to as high as 625 per minute.

The uniformly high quality of Anchor Caps is the result of practical research and engineering, careful selection, testing and control of raw materials, high manufacturing standards and thorough quality control through laboratory tests and regular inspections.

If you package or contemplate packaging in glass let us recommend and send samples of the closures best suited to your particular needs. The services of our Packaging Engineering and Research Laboratories are also available to help you solve glass packaging problems.

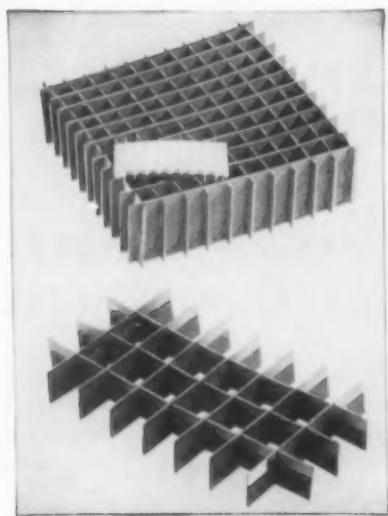


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(Formerly at 169-173 Franklin Ave.)



Glass-reinforced papers

(This article continued from page 152)
kraft) by a factor of better than four to one in shipment of fine mesh materials such as soda ash.

2. A single-ply Scrimtex bag is not satisfactory for the shipment of powdered chemicals. This failure appears to be due to the fact that even a small puncture will result in a loss of material.

3. Operators have commented that the bags having a Scrimtex outer ply are more easily handled than the standard bag and have less tendency to slip when stacked.

Comparative costs

Scrimtex is a new product still in the development stage. Costs at this time are admittedly high, but are being reduced as the production level increases. The two-ply Scrimtex bags used for soda ash are somewhat more expensive than the five-ply multiwall bag. However, in many cases, increased efficiency has more than paid for a slight increase in packaging cost. For example, a reduction of only 0.5% in multiwall-bag breakage on soda ash (price about \$39/ton) will more than absorb the increased packaging cost of the reinforced bags. In packaging the more expensive chemicals, the cost differentials become almost insignificant.

Other bag applications

Scrimtex bags can be used to package molten chemical products such as esterified gum resin and other synthetic resins. Particular applications are found where molten resins are packaged at temperatures above 350 deg. F. At these temperatures, high resistance to puncture during filling is required. Considerable interest in Scrimtex has been expressed by the chemical process industries both for export and domestic purposes. Materials such as synthetic rubber, polystyrene, methyl cellulose and monochloracetic acid are providing basic information on the characteristics of this new packaging material.

Much of our development work during the past two years has been concentrated in the petrochemical field. Many of these products require special consideration from a packaging standpoint due to high cost and, in some cases, toxicity problems.

The export market has increased considerably and the use of bags in

export packaging offers many advantages over other packaging materials. Multiwall bags can reduce cubage requirements in export shipments, provided the bags can be made strong enough to stand the rough handling conditions usually associated with overseas shipment.

Shipping containers

Another interesting application for Scrimtex is its use in solid fibre and corrugated shipping containers. Cornell Paperboard Products Co., Milwaukee, is doing a considerable amount of work in the development of both solid fibre and corrugated board containing Scrimtex. The reinforced paper is introduced into the board on the corrugator or board machine. Increased efficiency is obtained by using a Scrimtex, jute or kraft liner combination as one face of the corrugated board.

The board constructions used in the development program to date include the following:

1. 200# test ("B" flute) corrugated board, plus 120# 4848 Scrimtex standard. This is the same construction as regular 200# corrugated board except that Scrimtex is laminated to the inside of one 0.014 liner. (0.014 liner/Scrimtex/0.009 corrugated/0.014 liner.)

2. 0.060 solid fibreboard with 120# 4848 standard Scrimtex. This is the same as regular 0.060 solid fibreboard except that Scrimtex has replaced one 0.014 outside liner.

3. 0.090 solid fibreboard plus 120# 4848 Scrimtex. This is the same as regular 0.090 solid fibreboard except that one ply of Scrimtex has been placed in the center of the board.

Almost unlimited variations in board constructions are possible using the reinforced paper. The three listed above were chosen because of expressed interest during early stages of the development program. We are currently investigating other constructions using 2424 Scrimtex in place of the more expensive 4848 construction.

Characteristics of board

Table VI illustrates some of the more important characteristics of reinforced solid fibre and corrugated board. Comparative tests on other standard board materials are also listed. Improvements are noted in most strength tests, the largest being

LABEL SEAL-IT

**Folds, Seals Bags...
Attaches Labels
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This revolutionary machine brings tremendous economies to users of labelled heat-sealable bags!

CUTS LABEL COSTS—Uses labels printed on *ordinary printer's enameled stock*. No special thermo-plastic coated papers required.

ATTACHES LABELS SIMULTANEOUSLY as bags are sealed. Handles tent or saddle-type labels.

FAST, HERMETICALLY-TIGHT SEALING—Neatly heat-seals against moisture, evaporation and contamination. No staples, no pins, no unsightly closures. One operator does the work of two or more!

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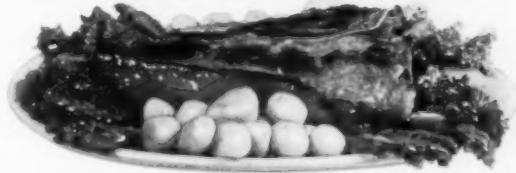
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The Country's Largest Manufacturer of FLOCK
CLAREMONT, NEW HAMPSHIRE

Thanks Elmer Wheeler
We'll sell the "steak", too!



Sell the sizzle and not the steak, said Elmer Wheeler once, in an inspired moment, and a new type of selling was born.

We go along with that, Elmer, but we'll sell the steak, too. It's our job not only to design packages that look good, but also act good—on production lines, on transit, at point-of-sale.

When a flexible package comes from Oneida, you just know it has been priced fairly—designed attractively—engineered to give contents the utmost protection, and manufactured to quality standards. We invite your inquiry.



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CONVERTERS AND COLOR PRINTERS OF BAGS, ENVELOPES, SHEETS AND ROLLS FROM GLASSINE, CELLOPHANE, PARCHMENT, POLYETHYLENE, SULPHITE, FOAM, ACETATE, KRAFT, WAXED, COATED AND LAMINATED GRADES

Here's an old timer!



Maybe you'd bet the new high gloss alkyd paper varnishes could not be run on this equipment. Perhaps the drier only goes to 225°F.—there's no cooling zone—no recirculation. Well . . . you'd be wrong! New Pyroxcote* 37-59 is running on this oldster, and high quality Pyroxcote finished labels are being produced hour after hour.

If you need high gloss, abrasion resistance, water shedding, and stamina under handling, you, too, should explore Pyroxcote paper finishes.



the torsion tear. As mentioned above, strength characteristics of the board may be modified through various glass constructions to meet nearly any requirement.

Such characteristics as wet tear, sustaining tearing and impact are also believed to be important. Actual performance in the field, however, must provide the final criterion of container efficiency.

Applications

Corrugated and solid fibre reinforced with Scrimtex find applications in fields where high tensile strength as well as sustained tear and puncture are important factors. Field tests now in progress include retainers for railroad car doors used for shipping grain and other bulk materials, as well as returnable and expendable pallets. It is expected that results will be available for release in the near future.

Other applications under consideration and study include containers for sub-zero temperatures where resistance to failure cannot be obtained with conventional materials. Temporary low-cost bins requiring high tensile panel construction also appear promising.

The high tensile strength and resistance to sustained tear of fibreboards combined with Scrimtex show considerable promise in producing containers, pallets and other protective barriers where these properties are essential.

Acknowledgments

The author wishes to express his appreciation to Bemis Bro. Bag Co. and Cornell Paperboard Products Co. for permission to utilize test data and for other help received during the preparation of this article.

More "Freon-22"

Plans for the construction of a new plant on the site of Du Pont's Louisville, Ky., Works for increase in the manufacture of "Freon-22," an aerosol propellant, have been announced by the company's "Kinetic" Chemicals Division. Completion is scheduled for early fall of 1955. Although capacity of the plant is not disclosed, the company said it will be based on long-range estimates of the need for "Freon-22" as a refrigerant and aerosol propellant and as an intermediate in the manufacture of the company's Teflon resin.

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full fashioned
60 gauge • 15 denier

TO FOCUS SHOPPER ATTENTION. LG Electronics.

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Product:	Kathleen Noland Fine Nylon Hosiery
Description:	Three color envelope printed on 450 weight moisture-proof cellophane
Sales Status:	A striking self service package designed for rack display in food super markets

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PACKAGE PRODUCTS

To catch the discerning eye of the woman shopper and persuade her to buy . . . Package Products created this bold, yet feminine envelope. The moisture-proof quality and strength of the cellophane makes it ideal for shelf display.

Your product too may need just this touch of color, beauty and sales appeal . . . whether it be in bags, wraps, or envelopes of cellophane, polyethylene or other packaging films.



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Housewives prefer packages with Seal-Spouts for these important reasons:

**Packages are easier
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Many manufacturers value the sales advantage of Seal-Spouts. You too may be benefited.

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Cushioned carriers

(This article continued from page 107) and one partition partially cut away clearly show the different types of embossments. In each carrier it may be observed that the effect of the embossing operation is to provide increased distance and cushioning between the individual bottles in the package. This goal is accomplished solely by the embossing and requires no additional material in the carry-home carton.

In the Conbur impact tests, developed by the Assn. of American Railroads to simulate the horizontal impacts a shipping container receives in rail shipment, a movable platform dolly is used which rides on an inclined track having a 10-deg. slope. The test consists of releasing a loaded container from a known distance up the incline and permitting it to strike against a fixed backstop at the bottom of the track and perpendicular to it. Test results are expressed in "footfalls," 10 falls at 1 ft. equaling 10 footfalls.

For the Anheuser-Busch tests, regular corrugated shipping containers loaded with four of the one-trip beer-bottle carriers were subjected to 10 impacts from a distance of 1 ft., 10 from $1\frac{1}{2}$ ft., etc., increasing the distance in $\frac{1}{2}$ -ft. increments until the point of failure, as indicated by bottle breakage.

As shown in the Conbur impact table, with the regular 28-point carrier the first container with unembossed carriers withstood nine impacts at 1 ft. for a total rating of nine footfalls. The second container withstood 10 impacts at 1 ft., 10 at $1\frac{1}{2}$ ft. and failed on the first impact at the 2-ft. level for a 27 footfall total. In a similar manner, the remaining containers (20 with and 20 without embossing) were tested until point of failure.

Comparative figures on the regular 28-point carriers and 28-point carriers having button embossments reveal some interesting test results. The average number of footfalls sustained prior to failure by the unembossed carriers was 15.7, in comparison with 26.4 footfalls for the embossed carriers. Scores recorded for the "control" containers ranged from a low of one footfall (and two of 2) to a high of 47.5 footfalls, while those attained by the embossed carriers ranged from a low of 13 footfalls to a high of 65. Out of 20 control containers, 10 had a lower



How to take a **Bigger Bite** of the white bread market

Do what more and more bakers are doing—wrap in Sylvania Cellophane.

Sylvania Cellophane keeps all types of bread fresher, longer. Customers see crust, color and quality at a glance—eye appeal strengthens buy appeal!

And, Sylvania Cellophane gives better machine performance—even at top speeds. This means strong, dependable heat seals—less clean-up time—fewer "cripples."

Savings from faster turnover and reduced stale returns more than offset slight extra cost.

Sylvania Division, American Viscose Corporation,
1617 Pennsylvania Boulevard, Philadelphia 3, Pa.



Freshness and flavor protection is provided by 300 MS-1 Sylvania Cellophane overwrap. 300 MS-5 is recommended for heavier, stiffer wrap.





Photographed underwater at Weeki Wachee Spring, Florida

Determined Detective makes Patapar underwater test

"It's elementary!" the famous sleuth remarked when he came up for air. "Patapar Vegetable Parchment has an almost unbelievable WET-STRENGTH!" Yes — you can soak Patapar for hours and hours — even boil it — but it still stays strong.

Patapar resists grease too

Patapar resists the penetration of fats, oils and grease just as effectively as it stands up in water. These qualities make it ideal as a food wrapper and for many other uses. And — Patapar is NON-TOXIC.

Some of Patapar's many uses

Patapar is produced in different types that meet all sorts of exacting require-

ments. Some of its diversified uses: wrappers for butter, poultry, margarine, ham, bacon, pork loins, cheese and other moist foods; milk can gaskets; rubber releasing separators; translucent master sheets for direct print copy machines; dialyzing membranes; in hospitals for wrapping articles to be sterilized in live steam. It is furnished in rolls or sheets, plain or beautifully printed with colorful designs.

In your business perhaps there is a job that could be done better with Patapar. Tell us about it, and we will send information and testing samples of the type of Patapar we recommend. Write today.

Patapar
Vegetable Parchment
HI-WET-STRENGTH • GREASE-RESISTING
HEADQUARTERS FOR VEGETABLE PARCHMENT SINCE 1885

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footfall score than the lowest recorded for the group of embossed carriers.

As pointed out by Mr. Ellis in interpreting the test results, "the interesting observation on the data in this table is not so much that the average of footfalls on the embossed carrier is approximately 66% higher than that of the regular carrier, but that the embossments provided enough cushioning to eliminate the extremely low values, i. e., those under 10 footfalls. This is significant in that it indicates that the embossments will help protect the marginal packages against breakage in handling and shipment."

The embossed carriers that are now available, Mr. Ellis believes, will increase protection without a sacrifice in carrier design. "As more experience is gained by the carton companies on this development," he comments, "the height and rigidity of the embossments will increase to a point where they will out-perform the first embossed carriers and will come close to the protection offered by corrugated board."

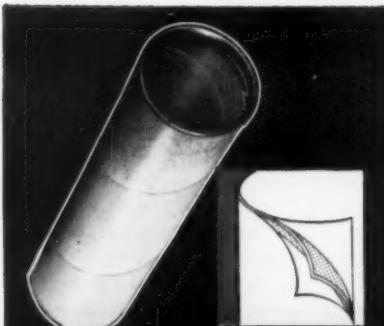
CREDITS: Suppliers of embossed-type carrier cartons cooperating with Anheuser-Busch, Inc., in this development include Atlanta Paper Co., 950 W. Marietta St., Atlanta 2, Ga.; Morris Paper Mills, Morris, Ill.; Shultz Folding Box Co., Pacific, Mo.; Standard Paper Box Corp., 3837 Broadway Pl., Los Angeles 37; and Sutherland Paper Co., Kalamazoo, Mich.

Modern cellophane lab

New equipment for cellophane testing and customer service experiments, duplicating almost every field condition under which the film is used, has been developed and installed at the newly modernized Technical Service Laboratory in Fredericksburg, Va., according to the American Viscose Corp.'s Sylvania Division.

The laboratory is utilized to implement Sylvania's own quality-control program and to assist commercial cellophane users in solving their individual packaging problems.

New equipment includes a flex-tester to determine durability, an adhesive tester and a multiple sealer. Commercial refrigerated display equipment is available for testing shelf life of packaged perishables under actual store conditions. A major development is the Sylvania web conditioner, designed to replace moisture driven from film during the printing operation.



LARDPAK LINER.

Lardpak liner inside, then fibre, and printed Lardpak paper used outside. A grease barrier for scores of materials. Example of use: caulking compounds.

LARDPAK, PITCH-BACKED.

This combination offers the packer both grease and moisture resistance. Example of use: various chemicals.



FOIL LINER.

Foil backed by pitch followed by two layers of fiber laminated with glue. Pitch serves two purposes: As adhesive for foil (2) scales for pin holes in foil. Example of use: Insecticides.

• There are many sides to the R. C. FIBRE CAN Packaging Story

- a complete line to fit your packaging needs

Have You a Fibre Can Packaging Problem?

Contact your nearest R. C. Sales Office for experienced advice. There's no obligation.

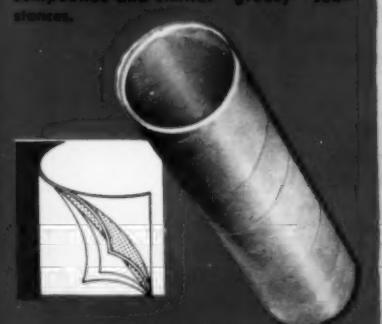


PARAFFIN COATING.

Paraffin lining obtained two ways: spiral wound from coated fibre, or sprayed in convolute can. Example of use: moth crystals, drugs, etc.

LAMINATED ALUMINUM.

Lardpak liner inside, followed by fibre, followed by two pieces of glossy wax laminated together with wax. High grease and moisture resistance. Example of use: caulking compounds and similar "greasy" substances.



CHIP KB.

Pitch layers between layers of fibre, for moisture resistance. Convolute can shown here. Example of use: wallpaper cleaner, cold water paints.



FOIL PAPER-BACKED.

Foil backed up by 20 lb. white bond paper, which serves as inside ply of container. Ideal for packaging that requires both moisture and grease resistance. Example of use: ready-to-heat biscuits, and similar food products.

R·C· CAN COMPANY

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A Service of **MODERN PACKAGING**
A BRESKIN PUBLICATION
575 Madison Avenue, New York 22, N. Y.

PI Forum plans

The 16th Annual Forum of the Packaging Institute to be held at the Hotel Roosevelt, New York, Oct. 25-27, will be outstanding in importance to users as well as producers of packaging materials, according to Frank W. Cray of Interchemical Corp., program chairman.

Seminars will feature Testing and Specifications for Packaging Materials, What Industry is Doing to Educate and Train its Packaging Employees, Adhesion as an Engineering Function, Problems of Drug and Pharmaceutical Packaging, The Last Word in Package Printing Processes, New Developments in the Formation of Packages from Heavy-Gauge Films, Problems Relating to the Newest Types of Shipping Containers, Line Production of Packages with Special Emphasis on Down Time and Factors Affecting this Form of Lost Production, Statistical Methods and their Application to Quality Control, Controlled Color and Gloss on Printed Packages, Odor and Moisture Control in Packaged Foods, Flexographic Printing.

The subject of the Impact of Color TV on Packaging has been placed on the program and Barry Wood, executive producer of Color Coordination, National Broadcasting Co., will discuss the matter and plans to stage a Color TV demonstration.

An all-day seminar is being planned on the Improvements in Printing Processes.

According to F. S. Leinbach of Riegel Paper Corp., president of PI, plans are being made to accommodate 1,600 persons, the largest registration the Institute ever had. The Forum is open to members as well as non-members of the Institute. Advance registration forms may be obtained by writing to Packaging Institute, 342 Madison Ave., New York 17.

Radar in re-use cans

(This article continued from page 135) occurs when the unit is transported by plane.

From what has been said, it will be seen that General Electric has produced a durable, adaptable, compact, re-usable container. How much better is it than the package it replaces?

In the first place, material and man-hour outlays for packaging have been considerably reduced. The weight and cubage of packaged equipment have

been greatly diminished. For example, the completed pack for a particular radar antenna formerly weighed 389 lbs.; the new-style packaging weighs only 255 lbs. The old box occupied 43.8 cu. ft.; the new one takes up only 20. It once required 5 hrs. to pack this antenna for shipment; now only 1 hr. is needed to pack the equipment.

Best of all, especially from the point of view of the Armed Forces, the new containers are fully re-usable. They can be employed for repeated transport of a radar component. They afford protection to spare components in storage or in transit. They serve as reliable safeguards against moisture, fungus, shock and similar equipment hazards.

Perhaps the most gratifying recognition of the improvement represented by re-usable containers is their enthusiastic acceptance by the Armed Forces authorities who provided the original impetus for their development. The new containers have shown up especially well on required tests of their durability.

G. E. containers weighing less than 200 lbs. when full are subjected to a free-fall drop test—i.e., they are dropped 30 in. onto a steel or concrete surface, the test being repeated for each of the eight corners. Containers weighing more than 200 lbs. packed must undergo a cornerwise drop test, in which one corner is dropped 36 in. while the opposite corner of the container rests 12 in. above the floor.

Containers are also put through pressure-retention, or submersion tests. Here the air-pressure relief valve is used to establish an internal air pressure of 5 lbs. per sq. in. and the closed container is submerged in water. The appearance of active air bubbles discloses any air leakage and renders the container unacceptable. Only airtight containers are released for shipment at French Road.

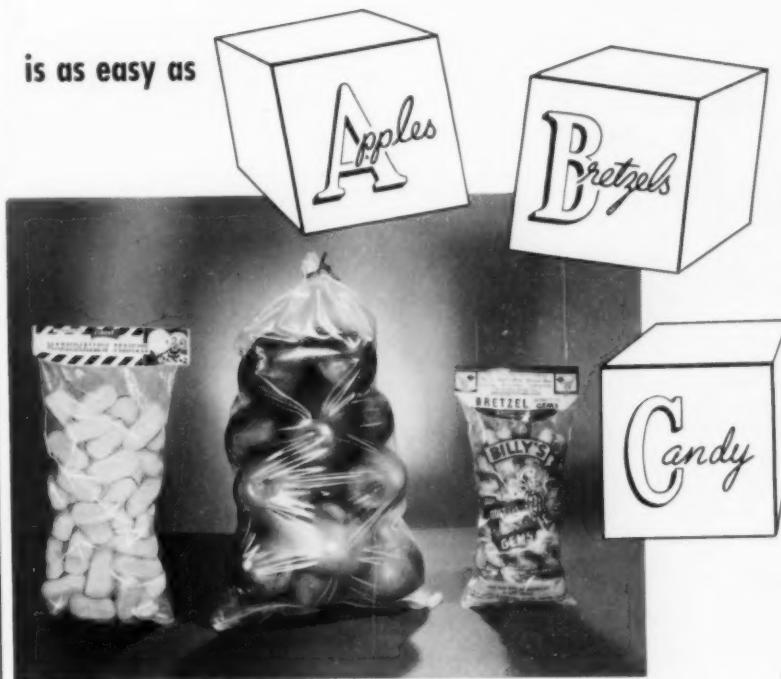
Excellent performance on these tests has satisfied the military packaging experts that G. E. re-usable containers are ideally suited to their purposes.

Indeed, a new packaging specification, directly based upon the plans of these units, is now in process of being drawn up.

CREDITS: Metal containers manufactured by Peters-Dalton, Inc., 17900 Ryan Rd., Detroit. Rubberized animal hair by Blockson & Co., Michigan City, Ind.

PACKAGING WITH POLYETHYLENE TUBING . . .

is as easy as



From left to right: Marshmallow Peanut Candy made and packaged by Spangler Candy Company, Bryan, Ohio; Apples by the Berks-Lehigh Co-op of Fleetwood, Pa. and Bretzel Gems by Billy's Bretzel Bakery in Reading, Pa., both packaged by Boyertown Bag Company of Boyertown, Pa.

Hundreds of satisfied customers continue to specify H & R polyethylene tubing to simplify their packaging problems. That's because H & R Industries specializes in extrusions of a wide variety of plastic materials that suit their individual needs, such as fresh fruit, baked goods and candy.

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FOR SALE: Paper cutting machines, hand lever, power, all sizes Seybolds, Sheridans. Die cutting and printing presses. Paper drills. High die blanking presses. Sheet metal machines. Used and rebuilt. Parts—sales—service. H. Levinson, Box 918, New York 8. Phone: GRAmacy 3-8341.

FOR SALE: Complete automatic Pneumatic Scale bottling line, excellent condition used very little, capacity 2000 cases day. Unscrubber, air cleaner, 18 head S.S. filler, rotary capper, front and back labeler, top case sealer. 380 ft. of 14 inch and 2100 ft. of 6 inch roller type conveyors. Frank Pluma, 212 No. Ave 19, Los Angeles 31, Calif.

FOR SALE: New Model A Transwrap Automatic packaging machine with Auger feed, automatic counter, hopper, synchro-vibrator and one pyrometer, serial # A2557. Slightly used Model B, serial # B1691 with electric eye equipped for design register and two sets of filling cups. Both can be bought much less than original cost. Box 836, Modern Packaging.

MORRISON WIRE ARM STITCHERS

1—SJR for 18 gauge wire, $\frac{1}{2}$ HP motor, 25" throat, 325 stitches per minute. \$750.00. 1—SJI 95° Angle Right Hand, $\frac{1}{2}$ HP motor, 325 stitches per minute. \$750.00. 3— $\frac{3}{4}$ " Strap Stitchers. \$20.00 each. All excellent condition. FOB Illinois.

Acme Equipment Co., Inc.
126 S. Clinton St.
Chicago 6, Illinois

FOR SALE: 2 complete Niagara Packaging Machines, Model 200, factory rebuilt to Turret Filler Type. Priced right and in good condition. Box 843, Modern Packaging.

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FOR SALE: Potdevin F & S Bag Machine as Model 101 range; N. J. Pony Laberite; Standard and Universal Brightwoods; Thomson Platen 26 x 36 and 22 x 30 Die Cutters; 32" Rutherford "All Purpose" Coasters; 60" Moore & White Sheet; 40" Parry Liner. Many Set-up, Folding and Corrugated Box Machines. Box 849, Modern Packaging.

FOR SALE: 24" Simplex for polyethylene bag making—late model. Box 851, Modern Packaging.

FOR SALE: Brand new, never used Hilker polyethylene bag making machine, Model 14. Will make bags up to 14" wide and 26" long. \$1300.00. Induction Heating Corp., 181 Wythe Ave., Brooklyn, N.Y. EVERgreen 4-3110.

MACHINERY AND EQUIPMENT WANTED

WANTED: Pneumatic Scale Packaging Line, Capper, Labeller, Cellophane Wrapper. P. O. Box 1351, Church St. Station, New York 8, N.Y.

WANTED: We will buy bag making machines in any condition—Please give age, serial number and best price. Bagmakers:—Roto, Simplex, Wrapade, Shumann, Potdevin. Reply to: J. Gedrich, 175 Clinton Place, Newark 8, N. J.

WANTED: Late model PO-2 Roto Polyethylene Bag Making Machines. Box 850, Modern Packaging.

WANTED: National Metal Edge Corner Stayng Machine in good condition. Box 852, Modern Packaging.

WANTED: Machinery for the packaging of small units of Nails, Screws, etc., preferably by count. Quote make, condition, age and price. Box 854, Modern Packaging.

HELP WANTED

SALES REPRESENTATIVE PRINTED CELLOPHANE: Pioneer company specializing quality gravure. Excellent opportunity to man on way up in flexible packaging—new markets, creative merchandising. Location New York. Packaging sales or related experience desired. Engineering degree preferred. Submit complete resume and starting salary requirements. Forbes Litho Mfg. Co., P.O. Box 513, Boston, Mass.

BROKERS OR SALES REPRESENTATIVES

If you sell to Food or Drug manufacturers or processors, here's an excellent opportunity to increase your income. Progressive midwest lithographer of four-color labels for glass containers wants representation in all territories. Commission, competitive prices, experienced creative staff, high quality press work, good service. Write immediately for complete details.

Box 837, Modern Packaging

SALES REPRESENTATIVES: Established packing firm seeks representatives for Nationally Advertised (see our advertisement in this publication) exclusive Strongtop, Cell-O-Poly and Barrier bags. May carry non-conflicting allied lines. Commission. Send resume of experience, other lines carried and territory covered. All replies confidential. Write to: Melrose Packaging Corp., 814 St. Ann's Avenue, New York 36, New York.

SELLING AGENTS WANTED: For pharmaceutical processing and packaging machinery. Outstanding imported line of pharmaceutical and cosmetic machines, diversified equipment seeks agents. Excellent opportunity for qualified reps with no conflicting lines. Send details, including present lines handled and territory covered. Box 838, Modern Packaging.

REPRESENTATION WANTED: Aggressive, diversified converter in the South has several territories open for representation in the Southeastern and Southwestern regions. All replies will be held in strict confidence. Box 839, Modern Packaging.

SALES REPRESENTATIVES—AGENTS: Leading Manufacturer of embossed, printed and diecut foil and paper labels, pressure sensitive labels, strung and diecut merchandise tags. Complete art department for creative and effective designs. Guarantee highest quality, good delivery and competitive prices. Territories open to experienced men with proven ability and good references. May carry non-competitive lines. Commission basis. Write full details. Box 841, Modern Packaging.

PLANT SUPERINTENDENT WANTED: by Paper Plant located in Chicago. We need a man who has practical knowledge of all types of Paper Converting machinery, slitters, rewinders, sheeters, and kindred equipment, and well trained in efficient handling of production. Knowledge of Paper Chemistry and Coating materials is beneficial but not essential. Give complete personal background years of experience, age, family status, starting salary desired etc. Box 847, Modern Packaging.

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(Continued on page 248)

MODERN PACKAGING

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puts quality

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A pioneer in using refinery-sealed packaging for oil, Kendall Refining Company insists on *quality protection for quality products*.

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When you order drums, pails or cans, invest in better packaging—and better selling—by specifying "Tri-Sure Closures."



AMERICAN FLANGE & MANUFACTURING CO. INC., 30 ROCKEFELLER PLAZA, NEW YORK 20, N.Y.
Tri-Sure Products Limited, St. Catharines, Ontario, Canada

(Continued from page 246)

SALESMAN: The man we need must have broad experience in closure or container field. Good opportunity with growing organization. Remuneration on sales basis. Send resume with initial application. The Poly-Seal Corporation, Chrysler Building, 405 Lexington Avenue, New York 17, N. Y.

SALES REPRESENTATIVE: If you are experienced in developing uses and sales for specialty paper bags, we have some interesting territories open. Write and tell us all about yourself. We will respect your confidence. American Bag and Paper Corp., Water and South Sts., Phila. 47, Pa.

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CELLOPHANE CONVERTING MAN: 10 years experience in aniline and rotogravure printing; bag, sheet, rewinder, and lamination machinery, for all kinds of transparent and flexible materials like: cellophane, polyethylene, etc. All phases of production and planning including storage and delivery. Speaks three languages. Desires position anywhere in the States or any other country. Box 840, Modern Packaging.

NEW YORK REPRESENTATIVE: Long established, representing out-of-town manufacturers of cotton bags, finds that loss of volume due to replacement of cotton bags by other kinds of packaging provides occasion for interest in acting as New York Representative for manufacturers of other items allied with or related to packaging. Have established office and can offer intelligent and dependable representation. Box 846, Modern Packaging.

REPRESENTATIVE: For packaging machinery, solid following throughout Industrial New York and New Jersey, seeks additional lines. Will consider exclusive agency or permanent position with blue chip account. Box 845, Modern Packaging.

PACKAGE DESIGNER: Versatile, experienced free-lancer—full of ideas to guarantee results for your products. Every detail of your design problems worked out fully: rough-to-finish, including mock-ups. Also point-of-sale displays. Arthur A. Altman, 550 Fifth Avenue, New York 36, N. Y. Telephone: Plaza 7-6454.

FOOD PACKAGING ENGINEER: 10 Years experience food production and automatic packaging machinery. Heavy experience in package development and design, specifications and testing procedures. Desires top production position. Box 842, Modern Packaging.

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MISCELLANEOUS

PLASTIC SCRAP AND REJECTS IN ANY FORM: Cellulose Acetate, Butyrate, Polystyrene, Vinyl, Polyethylene, etc. We pay top prices for clear, colored and printed scrap in any quantity. Box 834, Modern Packaging.

BRITISH PACKAGING MACHINE: Manufacturers have manufacturing capacity and sales outlets available for additional machines. Would consider manufacture under license or other arrangement. Carton making machines, strip tableting machines, tablet packing or other machines. Box 835, Modern Packaging.

I HAVE 1001 IDEAS: For adding "re-use value" at minute extra cost to bags, boxes, cartons. Examples: games, holiday motifs, home items, patterns, historical, Americanisms, etc. Can be "stock" items or developed for choice lead or account. Give your salesmen something extra to help get orders. Why not establish special such department? My services, fee, royalty or retainer. Box 844, Modern Packaging.

PLASTIC SCRAP: Cellulose Acetate and rigid vinyl sheet scrap in any quantity. Also Polystyrene, Acetate, Butyrate molded rejects, scraps and excess molding powder inventories. Box 833, Modern Packaging.

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Today, we are proud to present the Weber CW machine which produces a wide range of S.O.S. bag sizes with change-over sizes fast, efficient — and requiring a minimum of down-time.

Standard equipment includes Printer Drive, enabling direct coupling with any type flexographic press with ten pitch gears. Other features include an imprint device for size and trade mark and Farvel centralized lubrication system. Weber's standards of durable construction and quality are maintained thru-out. Write for complete details.

S.O.S. TYPE SUPER-MARKET CARRIER BAG

BAG WIDTHS	7 1/2 to 12 inches
BAG BOTTOMS	4 1/2 to 6 1/2 inches
TUBE LENGTHS	14 1/2 to 30 inches

- Produces up to 200 bags per minute
- Full flexibility of size range
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- Farvel centralized lubrication system
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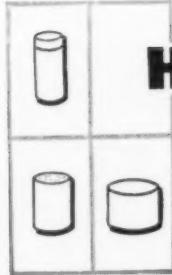
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Paper gun shoots to kill garden bugs! This novel Harcord package helps boost Pratt's Garden and Rose Dust sales to an all-time high! Harcord's simple yet effective powder spray gun works easily, conveniently, because Harcord standards turn out only action-perfect packages. And Harcord's budget-wise pricing permits a fast "retail" on a sell-on-sight-package.

You Sell It Better...
because You Say It Best with
PAPER CANISTERS by



HARCORD

HARCORD MANUFACTURING CO., INC.
125 Monitor St., Dept. MP-9, Jersey City, N. J.
New York Telephone BARclay 7-5685

AMMUNITION for insect control is one of the many areas where Harcord packaging plays a big and budget-conscious job . . . because these adaptable paper canisters are so well suited to the insecticide field. Special "moisture-proof" processing helps maintain the free-flowing high potency of many powdered insect killers. Let Harcord engineering "know-how" produce the canister that will suit the precise purpose of your product . . . well within your budget!



Vivid TAT MO-GO container lures customers with its eye-catching package . . . and snug, easy-action plug closure. This competitively priced Harcord canister puts self-service appeal into a top-performing insecticide.



Familiar sight on farms and orchards is this ORCHARD[®] Brand Genitox[®] S-50 container. This outstanding DDT spray powder is packaged by Harcord for General Chemical in a rugged paper canister which provides sturdy, long-lasting protection.

*Reg. U. S. Pat. Off.

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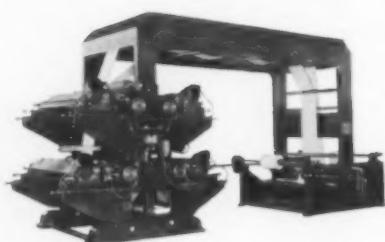
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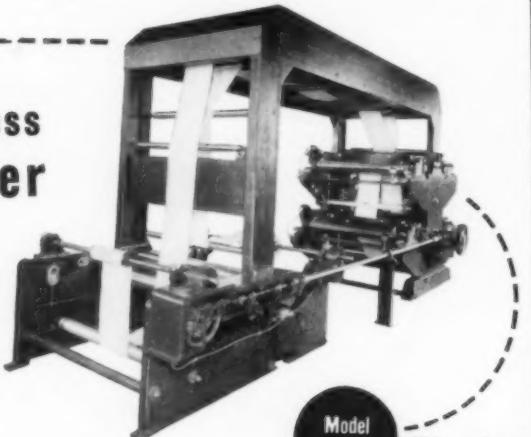
Introducing World's Finest Flexographic Press WOLVERINE Hydro-Printer



The Wolverine Hydro-Printer Model X-120 is now equipped with electro-magnetic induction brake and clutch for fully automatic, super-tension control on unwind and rewind units. Self-energizing and positive, eliminating time-consuming adjustments—a definite must for successful register printing of cellophane, foil, and any plastic film. Fully automatic and hydraulic with motorized free-wheeling ink rollers.

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Specially equipped to handle the most difficult and toughest flexographic printing jobs, the Wolverine Hydro-Printer Model X-120 is the finest press available today for the printing of any plastic film, acetate or cellophane. Its overhead drive allows high speed production on polyethylene, saran, vinyl and ploifilm and, of course, cellophane, foil and paper. Optional equipment available, such as motor, ink pumps, drying units, anilox system, etc.



Model
X-120

Write, wire or
phone today for
descriptive
literature on the
Wolverine Hydro-
Printer Model
X-120.

SPECIFICATIONS
1 to 6 colors
26" to 80" wide
Up to 40" stand-
ard repeat
Repeats to 60"
available



WOLVERINE
PAPER CONVERTING MACHINERY CORPORATION
18584 Fitzpatrick Avenue Detroit 28, Michigan

this man knows how
to prepare fine food!



THIS IS AN AGE OF
SPECIALIZATION!

THESE FIRMS KNOW HOW TO SOLVE
glass-packaging problems!

The firms listed in this advertisement KNOW glass containers. They keep abreast of changes, improvements and merchandising trends in packaging. Individually and collectively, theirs is unquestioned leadership in their industry.

NATIONAL ASSOCIATION OF GLASS CONTAINER DISTRIBUTORS

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BALTIMORE, Maryland
Atlantic Glass Co.

BOSTON, Mass.
S. H. Ansell & Sons

BOSTON, Mass.
Roxbury Bottle Company

BROOKLYN, N. Y.
J. Robinowitz & Sons

CHICAGO, Illinois
W. Braun Co.

CHICAGO, Illinois
Continental Glass Company

CLEVELAND, Ohio
State Bottle Company

DETROIT, Michigan
M. Jacob & Sons

KANSAS CITY, Missouri
R. Peltzman Bottle Co.

LONG ISLAND CITY, N. Y.
United Bottle Company

LOS ANGELES, California
California-Eureka Bottle Co.

MIAMI, Florida
Magic City Bottle & Supply

MILWAUKEE, Wisconsin
A. D. Braun Co.

MINNEAPOLIS, Minn.
Twin City Bottle Company

MONTRÉAL, Canada
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Qualified Glass Containers Wholesalers are equipped to
help you on every problem involving use of glass containers.

HAMMER



BRANDS

TAILOR MADE PAPERS
FOR PROTECTIVE PACKAGING
FOR FOODS • TOBACCO
PHARMACEUTICALS • METALS

GLASSINE

TRANSPARENT • OPAQUE

WHITE • COLORED

PLAIN • WAXED • TREATED • COATED

WAX LAMINATED

GLUE MOUNTED

ALSO TO FOILS • FILMS • KRAFTS

AIR-TIGHT

ODORPROOF

GREASEPROOF

MOISTURE PROOF

HIGH DENSITY

PRINTABLE

FLEXIBLE

HIGHEST QUALITY • PROMPT SERVICE

THE HAMERSLEY MFG. CO.
PAPERMAKERS

GARFIELD

NEW JERSEY

"77 Years of Service to the Food Industry"

SEPTEMBER 1954

IDENTITY MARKS ON EVERY TYPE OF SURFACE . . .



YOUR LABEL PROBLEMS SOLVED BY EVER READY IS



THE SUM TOTAL OF PROGRESS OF ALL THE AGES !!



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... your trade-mark or advertising message should be Ever Ready to serve, work and sell for you . . . on any surface type.

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EVER READY LABEL CORP. 357 CORTLAND ST.
BELLEVILLE 9, N. J.



"First 100% transparent men's hosiery package ...and it's made of Monsanto VUEPAK!"

—Mr. F. D. MacIver, President
Phoenix Hosiery Co.
Milwaukee, Wisconsin



Containers fabricated by A. G. Bardes Company, Inc., Milwaukee, Wis.

"Vuepak cellulose acetate packaging is revolutionizing the men's hosiery field," says Mr. MacIver, president of the Phoenix Hosiery Co., makers of new Stretchmaster socks. "Display racks showing colorful merchandise in transparent containers of Vuepak attract and stop traffic . . . let customers shop the merchandise, Vuepak puts a showcase around our product, makes selection easy and pleasant . . . stimulates a desire to own a 'wardrobe' of socks . . . makes men's hosiery a smartly packaged gift."

Rigid, transparent Vuepak cellulose acetate is preferred by buyers and wholesalers because they know that nothing creates sales

better than *the goods themselves*, properly packaged. Vuepak protects merchandise from soilage and resulting mark downs . . . shows every product with its best foot forward. Vuepak is lightweight, yet sturdy, and can be printed and embossed in scores of sales-creating ways. Easily combined with other packaging materials, Vuepak puts the sizzle that sells in today's package.

Let Vuepak bring the power of sight to your sales! Full-view Vuepak packaging is surprisingly inexpensive . . . and the greater your sales volume, the lower the cost per package. Ask your supplier, or mail this coupon for complete details on Monsanto's Vuepak.

Vuepak: Reg. U. S. Pat. Off.

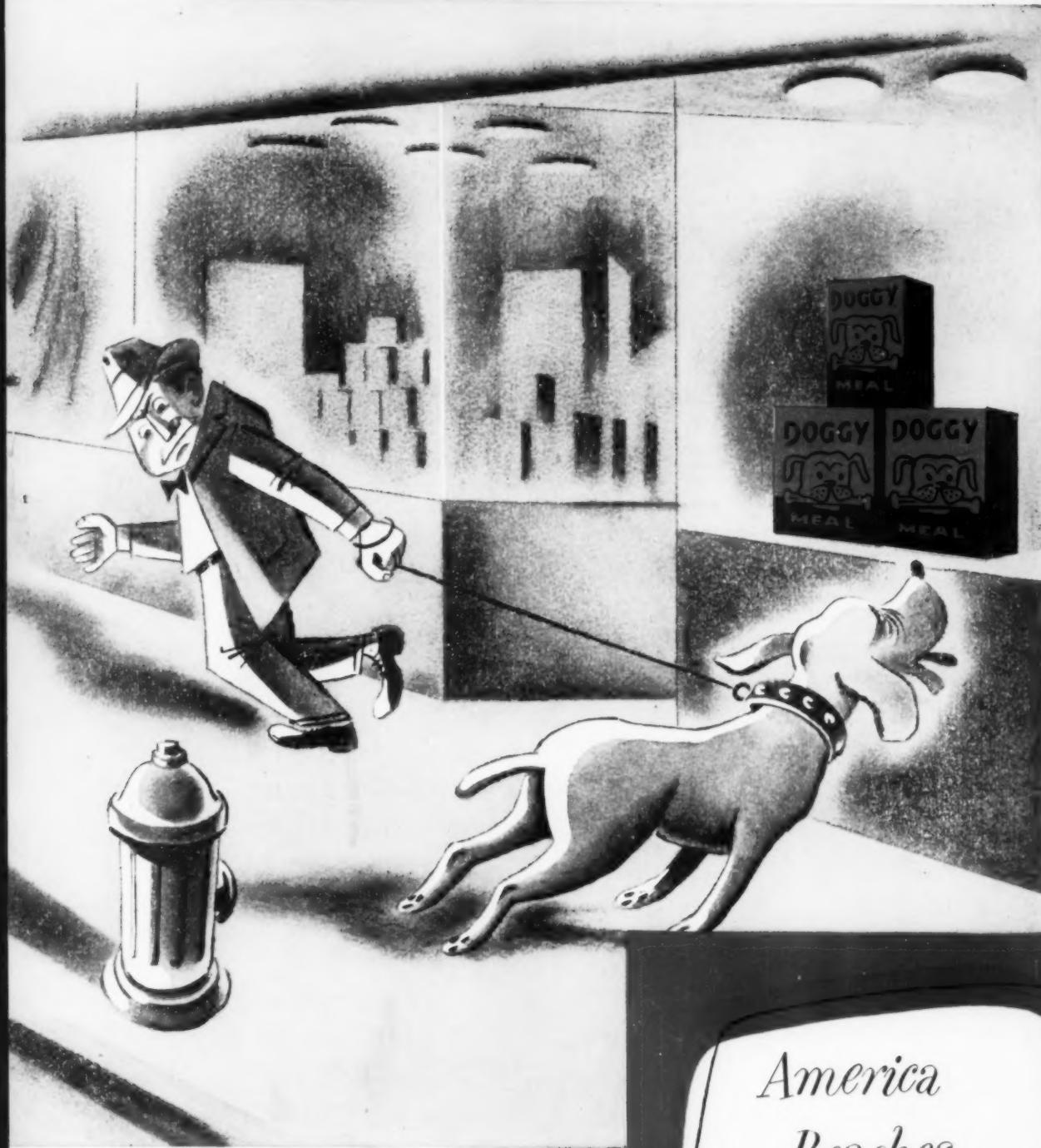


MONSANTO CHEMICAL COMPANY, Plastics Division, Room 4105, Springfield 2, Mass.
Please send me your new packaging report and information on Vuepak.

Name & Title _____

Company _____

City, Zone, State _____

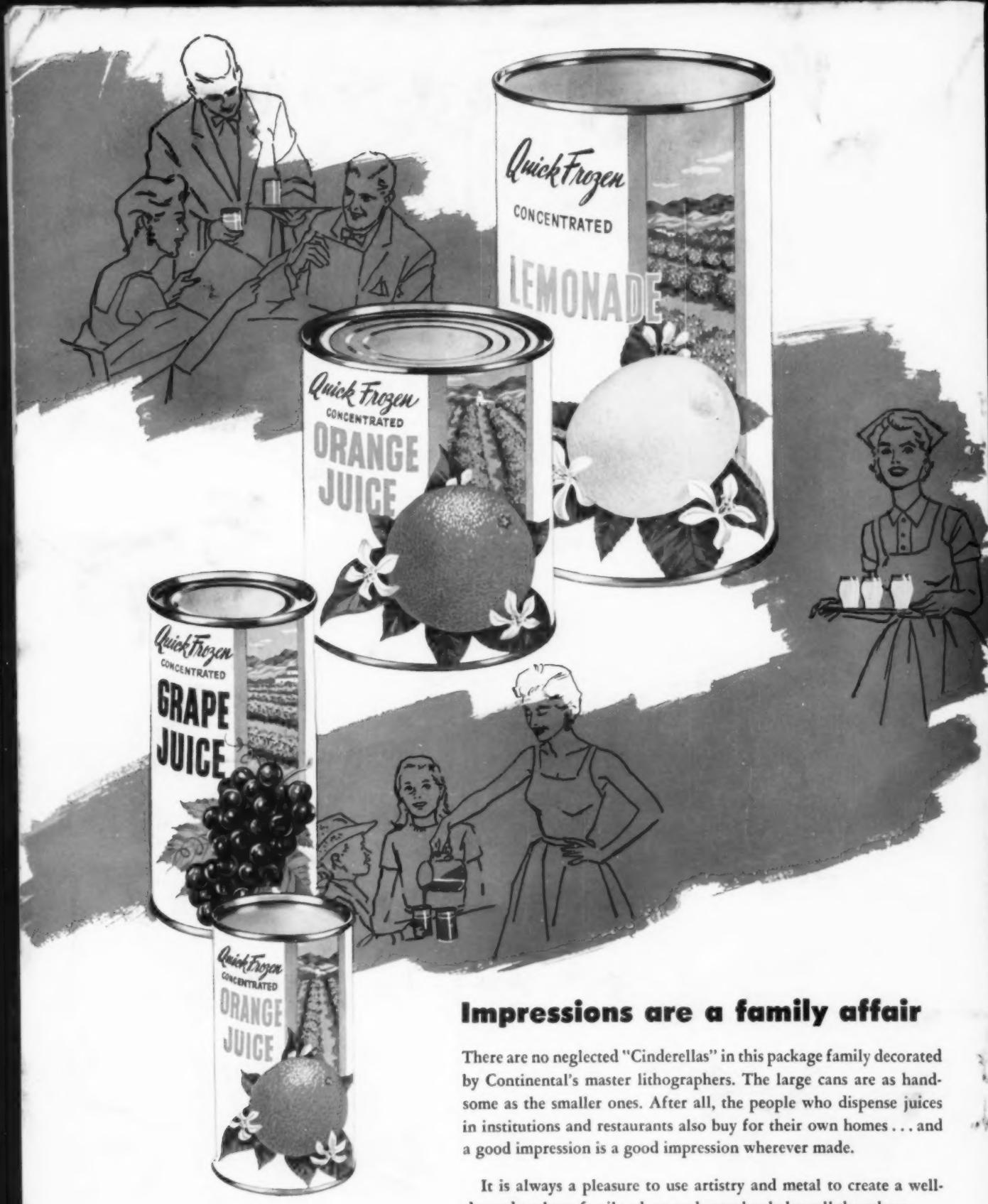


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Reaches
for **Michigan**
Cartons

MICHIGAN CARTON CO.

BATTLE CREEK, MICHIGAN

Package Makers to the Nation



Impressions are a family affair

There are no neglected "Cinderellas" in this package family decorated by Continental's master lithographers. The large cans are as handsome as the smaller ones. After all, the people who dispense juices in institutions and restaurants also buy for their own homes . . . and a good impression is a good impression wherever made.

It is always a pleasure to use artistry and metal to create a well-dressed package family where each member helps sell the others.

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**TAILOR-MADE
PACKAGE SERVICE**